

DRAFT FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS

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Document considered draft until Board considers document

Berths 302-306 [APL] Container Terminal Project

Environmental Impact Report (EIR)

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FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS

I Introduction

These Findings of Fact have been prepared by the Los Angeles Harbor Department (LAHD, or Port) as the Lead Agency pursuant to Section 21081 of the Public Resources Code (PRC) and Section 15091 of the State California Environmental Quality Act (CEQA) Guidelines to support a decision on the Berths 302-306 [APL] Container Terminal Project (proposed Project).¹ Section 21081 of the Public Resources Code and Section 15091 of the CEQA Guidelines provide that no public agency shall approve or carry out a project for which an Environmental Impact Report (EIR) has been certified that identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

1. Changes or alterations have been required in, or incorporated into, the project, which avoid or substantially lessen the significant environmental effects as identified in the Final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provisions of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Additionally, the Lead Agency must not approve a project that will have a significant effect on the environment unless it finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the unavoidable adverse environmental effects (PRC § 21081(b); 14 California Code of Regulations [CCR] § 15093). The Board of Harbor Commissioners (Board) adopts the Statement of Overriding Considerations set forth below, which identifies the specific overriding economic, legal, social, technological, or other benefits of the project that outweigh the significant environmental impacts identified in the Final EIR (EIR).

¹ The proposed Project includes project elements that will require federal permits from the U.S. Army Corps of Engineers (USACE). As such, an Environmental Impact Statement (EIS) was also prepared for the proposed Project. The USACE and LAHD prepared a joint EIS/EIR (EIS/EIR) in the interest of efficiency and to avoid duplication of effort. The USACE will consider certification and approval of the EIS separate from the Board of Harbor Commissioner's consideration of the EIR.

Project Overview

Introduction

This section describes the proposed Project analyzed in the Berths 302-306 [APL] Container Terminal Project EIR. The EIR analyzes the construction and operation of the proposed Project. The proposed Project is located on Terminal Island, within an industrial area in the vicinity of Fish Harbor. The site is within the Port of Los Angeles Community Plan area of the City of Los Angeles. The proposed Project is located on Pier 300, within LAHD property.

Project Purpose

The LAHD operates the Port under the legal mandates of the Port of Los Angeles Tidelands Trust (Los Angeles City Charter, Article VI, Section 601) and the California Coastal Act (PRC Division 20 Section 30700 *et seq.*), which identify the Port and its facilities as a primary economic and coastal resource of the State of California and an essential element of the national maritime industry for the promotion of commerce, navigation, fisheries, and Harbor operations. Activities should be water dependent and the LAHD must give highest priority to navigation, shipping, and necessary support and access facilities to accommodate the demands of foreign and domestic waterborne commerce. The LAHD is chartered to develop and operate the Port to benefit maritime uses, and it functions as a landlord by leasing Port properties to more than 300 tenants.

The proposed Project is needed to meet a portion of the Port's projected container throughput demand for the year 2035. In 2007, studies projected Port container throughput demand within the San Pedro Bay Ports Complex of Los Angeles and Long Beach (Port Complex) would be constrained at 43.2 million twenty-foot equivalent units (TEUs) by 2023; however, this projection was revised in 2009 to take into account a prolonged economic downturn, which negatively impacted global trade and resulted in dramatically reduced actual container throughput and future growth projections. As a result, current projections now estimate that, assuming planned capacity expansions and handling efficiency improvements occur, the Port Complex throughput capacity constraints would be experienced in 2035 at 43.2 million TEUs, twelve years later than expected in the 2007 study. The revised projection assumes completion of planned physical and operational improvements to terminals within the Port Complex, including the proposed Project.

Providing the capacity needed to manage the projected level of cargo throughput is critical for the Port to fulfill its role of facilitating trade along the Pacific Rim, which is expected to grow with anticipated increases in population and foreign trade. The Port also is instrumental to the regional and national markets.²

Additionally, a purpose of the proposed Project is to optimize and expand the cargo handling capacity at the APL Terminal to accommodate the increased throughput demand expected at the Port, including at the APL Terminal, in the long-term, while also maintaining consistency with established Port policies pertaining to the environment. This objective would be accomplished through expansion and improvement of the existing Berths 302-305 marine terminal from the current 291 acres to approximately 347 acres, including extension of the existing wharf by 1,250

² It should be noted that the previously cited forecast and capacity studies are Port-wide studies and do not consider the market conditions of individual shipping companies and terminal operators. There are competitive differences between container terminals within the Ports, and each terminal's market share will reflect these differences at any given point in time.

feet (creating Berth 306), to accommodate an annual throughput of approximately 3.2 million TEUs by 2027.

The expansion and optimization of Pier 300 has been contemplated and analyzed in evaluations prepared for the Port, including Port Plan, Port Master Plan (as amended), and the *Channel Deepening Supplemental EIS/EIR*.

CEQA Objectives

CEQA Guidelines (Section 15124[b]) require that the project description contain a statement of objectives, including the underlying purpose of the proposed Project. The LAHD's overall goal for the proposed Project is threefold: (1) provide a portion of the facilities needed to accommodate the projected long-term growth in the volume of containerized cargo through the Port and at the APL Terminal; (2) implement the Port's green growth strategy, which includes growing core operations while greening to mitigate the environmental impacts of that growth on the local communities and the Los Angeles region; and (3) carry out the Port Strategic Plan to maximize the efficiency and capacity of terminals while raising environmental standards through application of all feasible mitigation measures. The Port's green growth strategy relies on utilizing pollution control measures included in the Clean Air Action Plan (CAAP), sustainable lease agreements, and other sustainability measures.

To meet the overall Project purposes, the following objectives need to be accomplished:

- Optimize the use of existing land at Berths 302-305, the proposed Berth 306 backlands, and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- Improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- Increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306;
- Incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berth 306; and
- Improve the access into and out of the terminal and internal terminal circulation, at Berths 302-306 to reduce the time for gate turns and to increase terminal efficiency.

Project Description

The proposed Project encompasses approximately 347 acres and includes improvements to the existing 291-acre APL Terminal and an expanded area of 56 acres. Proposed improvements to the existing terminal would:

- Modify the outbound gates associated with the main gate;
- Modify the terminal entrance lanes;
- Modify the Earle Street gate;

- Install up to 4 new cranes at Berths 302-305;
- Convert a portion of the existing dry container storage unit area to a refrigerated container unit (reefer) storage area equipped with plug-in electric power;
- Demolish and re-construct the Roadability Facility;
- Expand the Power Shop facilities by constructing and operating a separate two-story Power Shop Annex building (just north of the existing Power Shop), which would include tractor maintenance bays (first floor) and Marine Offices (second floor); and
- Install utility infrastructure at various areas in the existing backlands (including the removal and installation of new light poles, utilities for a new “Meet and Greet” booth on backlands behind Berth 301, etc.).

Proposed expansion area work would:

- Construct approximately 1,250 linear feet (4 acres) of concrete wharf to create Berth 306;
- Install up to 8 new cranes on the new wharf at Berth 306;
- Install Alternative Maritime Power (AMP) along the new wharf at Berth 306;
- Dredge Berth 306; the dredge material (approximately 20,000 cubic yards will be beneficially reused (as fill), or disposed of at an approved confined disposal facility (CDF) site. If these options are unavailable or impracticable, an existing ocean disposal site could be considered (i.e., LA-2);
- Improve approximately 41 acres of already constructed but unimproved fill as container terminal backland with infrastructure that could support traditional operations, electric equipment operations, as well as potentially automated operations on the Berth 306 backlands (a majority of the new infrastructure would be located adjacent to existing stations or substations near the reefer area of the existing backlands);
- Redevelop approximately 2 acres of the former LAXT conveyor right of way and approximately 7 acres of former LAXT backland behind Berth 301 into container terminal backland; and
- Develop approximately 2 acres of existing land northeast of the current main gate for a new out gate location.

The proposed Project elements align along four distinct categories:

- Shoreline Improvements;
- Dredging;
- Berths 302 – 305 Backlands Redevelopment; and
- Development of Berth 306 41-acre Backlands

The detailed project elements within each of these larger categories of land uses are described herein.

Shoreline Improvements

The proposed shoreline improvement includes the wharf area expansion and improvement, and new shore-side gantry cranes. The key components for each of these elements are described in greater detail below.

Wharf Area Expansion and Improvement

The proposed Project would include construction of approximately 1,250 linear feet of new wharf area, encompassing approximately 4 acres that would extend eastward from the existing Berths 302-305 wharf. No new rock dike or fill would be required, as this area was previously constructed as part of the Channel Deepening Project, which created the 41-acre undeveloped fill area along Berths 305 and 306. New wharf construction would, however, require the placement of approximately 515 new 24-inch-diameter concrete piles to support the new wharf. These piles would be placed by barge-mounted pile drivers that would be brought to the site by tugboat and temporarily supported by a wharf boat. Construction would also involve the operation of concrete trucks, and heavy-duty over-the-road trucks for the delivery of structural materials, cranes, and other fabrication equipment.

When completed, the concrete wharfs of Pier 300 (Berths 302-306) would total approximately 5,250 feet. The existing wharf was designed to accommodate the largest ships in the current transpacific fleet, which can each carry up to 10,000 TEUs. The new wharf extension would be similarly designed. The existing wharf currently has four (4) berths based on the existing average vessel size. Once the new wharf along Berth 306 is completed (approximately 2014), the number of berths serving the terminal would increase to approximately 4.5. However, as fleet changes occur and larger vessels are used over time, the number of useable berth space along the Berths 302 to 306 wharf would decrease to 3.5 berths by 2027.

The crane models, currently operating at the existing wharf are not able to span the width of vessels capable of carrying more than 10,000 TEUs. The new wharf extension and cranes would have the capacity to accommodate larger ships. The largest vessel that is expected to operate as part of the transpacific fleet through year 2027 is the 10,000 to 10,999 TEU vessel. This analysis assumes the operation of a range of TEU vessels that includes the 10,000 to 10,999 TEU vessels. AMP infrastructure would be installed along the new wharf at Berth 306. AMP is the technique of utilizing shoreside electrical power from the power grid to operate the container ships when they are berthed at an appropriately equipped wharf. AMP connection voltage would be 6.6 kilovolts, 3-phase, 60 Hertz. The proposed Project would assist visiting fleets (in this case, APL and third party shipping lines) to comply with the California Air Resources Board (CARB) adopted schedule for implementing AMP power.³

In addition to electricity, the standard ship services at wharf include other utilities, such as telephone and water hook-up facilities at each berth.

³ As provided for under Title 17, California Code of Regulations section 93118.3, a fleet's vessels - including container vessels, passenger vessels, and refrigerated container (reefer) vessels - must shut down their auxiliary engines (not including 3 or 5 permissible hours of total operation, as specified in the regulation) as follows: (a) In 2014, at least 50 percent of a fleet's visit to the port must meet these operational time limits, and the fleet must reduce its fleet's onboard auxiliary-diesel engine power generation at a given berth by 50 percent from its baseline power generation; (b) in 2017, at least 70 percent of a fleet's visit to the port must meet the aforementioned operational time limits, and the fleet must reduce its fleet's onboard auxiliary-diesel engine power generation at a given berth by 70 percent from its baseline power generation; and (c) in 2020, at least 80 percent of a fleet's visit to the port must meet the aforementioned operational time limits, and the fleet must reduce its onboard auxiliary-diesel engine power generation at a given berth by 80 percent from its baseline power generation.

New Shore-Side Gantry Cranes

Under the proposed Project, up to 12 new A-frame cranes (also known as shore side gantry cranes) would be installed on the wharves at Berths 302 to 306 (four new cranes would be added to the 12 existing cranes on the existing wharf along Berths 302-305, and eight new cranes would be installed at the new Berth 306 wharf). With the existing 12 cranes and the installation of the proposed 12 new cranes at Project completion, the APL Terminal would have a total of 24 cranes. A-frame cranes at the existing terminal have fixed towers that are approximately 245 feet high. When stowed (at a 45-degree angle), the articulated booms on these cranes normally extend to a height of about 280 feet and, for maintenance, are capable of being extended up to 360 feet in the vertical position.

The 12 new cranes would function in a similar manner to the existing cranes but have a longer outreach and higher lift capabilities than the existing cranes in order to accommodate larger ships. When stowed, the height of the new cranes is estimated to extend to approximately 340 feet, and while operating, the A-frame structure of the cranes is estimated to stand at approximately 260 feet.

The new cranes would be outfitted with semi-automatic dual trolley equipment so that they could support an automated backland behind the new Berth 306 if such a system is used.

Dredging

The portion of the channel adjacent to the new wharf at Berth 306 would be dredged to restore a depth of -55 feet mean low low water (MLLW) plus an additional two feet of overdredge. New ships in the world container vessel fleet and pending ship orders indicate that container vessels with a draft of -52 feet are being planned, which would require a channel as deep as -55 feet MLLW plus an additional two feet of overdredge during construction dredging (tolerance). The area along Berth 306 is at various depths within the low fifties and currently less than 55 feet deep. Approximately 20,000 cubic yards of marine sediments would be removed alongside Berth 306 to achieve the desired design depth.

Berths 302 – 305 Backlands Redevelopment

Redevelopment of the backlands at the existing APL Terminal involves existing buildings, backlands, and gates.

Buildings. The proposed Project would include demolition and reconstruction of the Roadability Facility, including approximately 4,160 square feet of new building space and approximately 10,000 square feet for two new canopies. In addition, the proposed Project would expand the Power Shop facilities to add tractor maintenance bays and Marine Offices, including approximately 10,158 square feet for the maintenance bays, and approximately 10,150 square feet of second floor space for offices. The redevelopment of the Marine Office facility would meet Leadership in Energy and Environmental Design (LEED) standards and are expected to achieve, at minimum, LEED silver certification, consistent with the LAHD Green Building Policy.

Backlands. The proposed Project would convert a portion of dry container storage unit area to a refrigerated container storage unit (reefer) area with use of electric power. Terminal lighting and fire hydrants would be installed within the improved backland areas. The additional backland improvements would require construction activities such as grading, drainage, paving, striping, lighting, fencing, and the addition of utility facilities and equipment.

Gates. The proposed Project includes the construction of a new Meet and Greet booth (approximately 400 square feet) on backlands behind Berth 301, modifications to the Earle Street

Gate, and modifications to the northeast entrance. Development in the northeast entrance area would include construction of a new out-gate on two acres of undeveloped land northeast of the current main gate, coupled with reconfiguration of the old out-gate.

In addition, within the existing backlands behind Berths 302-305, the proposed Project includes the installation of a new Los Angeles Department of Water and Power (LADWP) industrial station (adjacent to the existing industrial station and new AMP substation, which is located near the existing Roadability Canopy/Genset Building), as well as various substations to support either traditional or electric-powered automated operations on the 41 acres of backlands adjacent to proposed Berth 306. If the new Berth 306 backlands are used to support an automated operation in the future, an area approximately 12 acres in size within the existing backland area adjacent to the new backlands would need to be converted to a Landside Transfer Area (a delineated area where drivers and trucks wait for containers held within the Berth 306 backlands).

Development of Berth 306 41-acre Backlands

Development of the Berth 306 backlands on the 41-acres of undeveloped fill adjacent to the existing terminal would include grading; paving and striping; as well as installation of smaller substations underground electrical lines; water lines; light poles; conduits to support electrical, data and phone connections; sewers; gas lines; and drainage infrastructure. This infrastructure would be adequate to support either traditional or electric-powered automated operations (or some combination of the two).

In addition, other infrastructure elements would be built as part of the initial Project construction that would support either a traditional or an automated 41-acre backland at a later date, such as approximately 7,100 linear feet of rail sets that would support RMGs or the electric Automated Stacking Cranes (ASCs), and any additional corresponding electrical distribution system.⁴ The rail sets would be oriented parallel to the berth; the new ASCs, if installed, would likely be larger, with a cantilever on one side and sized to span a stack that is six containers high and 12 containers wide.

Construction for the rails and installation of the ASCs would involve excavation, installing concrete beams that would later support steel rails, paving, and installing conduits for electrical power and data connectivity.

If EMS determines that automated operations are feasible and cost effective for the Berth 306 backlands, additional infrastructure specific to the automated operation would need to be installed. Future installation of the automated equipment would be less complex than installation of the supporting infrastructure that has been included in the initial construction plans for the backland area. This additional work would include some asphalt grinding to flatten the finished grade and to expose the concrete beams, installation of steel rails, and installation of reefer racks (foundations with plug-in electric power) along the edge of the 41-acre area (these racks would allow refrigerated container units to be stored). Improvements to delineate and support operation of the Landside Transfer Area would also be installed adjacent to the Berth 306 backlands, including some excavation and installation of concrete rail beams to support the LTCs, pavement striping, waiting booths for drivers, and concrete curbing.

⁴ Although additional electrical distribution would be required to operate an automated 41-acre backland, the additional power infrastructure needed to support automated operations is proposed as part of initial Project construction.

II CEQA Findings

The Findings of Fact are based on information contained in the Draft EIS/EIR and the Final EIR for the proposed Project, as well as information contained within the administrative record. The administrative record includes, but is not limited to, the proposed Project application, Project staff reports, Project public hearing records, public notices, written comments on the Project and responses to those comments, proposed decisions and findings on the proposed Project, and other documents relating to the agency decision on the Project. When making CEQA findings required by Public Resources Code Section 21081(a), a public agency shall specify the location and custodian of the documents or other material, which constitute the record of proceedings upon which its decision is based. These records are in the care of the Director of Environmental Management, Los Angeles Harbor Department, 425 South Palos Verdes Street, San Pedro, California 90731.

The Draft EIS/EIR addresses the Project's potential effects on the environment, and was circulated for public review and comment pursuant to the State CEQA Guidelines for a period of 45 days. Comments were received from a variety of public agencies, organizations, and individuals. The Final EIR contains copies of all comments and recommendations received on the Draft EIS/EIR, a list of persons, organizations and public agencies commenting on the Draft EIS/EIR, responses to comments received during the public review, and identifies changes to the Draft EIS/EIR. This section provides a summary of the environmental effects of the proposed Project that are discussed in the Draft EIS/EIR, and provides written findings for each of the significant effects, which are accompanied by a brief explanation of the rationale for each finding.

Environmental Impacts of the Proposed Project

Less than significant Impacts

The EIS/EIR concludes that all impacts of the proposed Project in the following environmental resource areas would be less than significant:

- Aesthetics and Visual Resources
- Cultural Resources
- Geology
- Groundwater and Soils
- Hazards and Hazardous Materials
- Land Use
- Marine Transportation
- Recreation
- Public Services and Utilities
- Water Quality, Sediments, and Oceanography

In addition, the EIS/EIR concludes that some, but not all, impacts of the proposed Project in the following environmental resource areas would be less than significant prior to mitigation:

- Air Quality, Meteorology and Greenhouse Gases
- Biological Resources
- Noise

Significant Impacts

The EIS/EIR concludes that some, but not all, impacts of the proposed Project in the following environmental resource areas would be significant prior to mitigation:

- Air Quality, Meteorology and Greenhouse Gases
- Biological Resources
- Ground Transportation
- Noise

In addition, the EIS/EIR concludes that all significant impacts of the proposed Project in the following environmental resource areas would be less-than-significant after mitigation:

- Biological Resources
- Ground Transportation
- Noise

Many of the significant impacts in the above resources areas could be reduced to less than significant with mitigation. However, as discussed below, the EIS/EIR determines that certain significant impacts cannot feasibly be mitigated and would remain significant and unavoidable under CEQA.

Significant and Unavoidable Impacts

The EIS/EIR concludes that some, but not all, impacts of the proposed Project in the following environmental resource areas would remain significant and unavoidable despite imposition of all feasible mitigation:

- Air Quality, Meteorology and Greenhouse Gases
- Biological Resources

The impacts identified above are respectively presented in Tables 1-1, 1-2 and 1-3. Findings are provided for impacts found not to be significant, significant impacts that are mitigated to less than significant, as well as significant and unavoidable environmental impacts. Where mitigation measures are proposed, these mitigation measures are included in a Mitigation Monitoring Reporting Plan (MMRP), which has been prepared separately from these findings.

In addition to the mitigation measures that have been required in, or incorporated into, the proposed Project, several alternatives were identified in the EIS/EIR in order to attempt to reduce significant environmental impacts associated with the proposed Project. All alternatives to the proposed Project and associated findings are discussed in this document.

Findings Regarding Environmental Impacts Found to Be Significant and Unavoidable

The LAHD Board of Commissioners hereby finds that the following environmental impacts (in Table 1-1) of the proposed Project are significant and unavoidable:

Table 1-1. Significant and Unavoidable Adverse Environmental Impacts for the Proposed Project			
<i>Environmental Impact</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
AIR QUALITY, METEOROLOGY AND GREENHOUSE GASES			
AQ-1: Project construction would produce emissions that would exceed SCAQMD emission significance thresholds.	Significant impact for VOC, CO, NO _x , PM ₁₀ , and PM _{2.5} .	MM AQ-1. Harbor Craft Used during construction. MM AQ-2. Cargo Ships. MM AQ-3. Fleet Modernization for On-Road Trucks. MM AQ-4. Fleet Modernization for Construction Equipment. MM AQ-5. Best Management Practices. MM AQ-6. Additional Fugitive Dust Controls. MM AQ-7. General Mitigation Measure. MM AQ-8. Special Precautions near Sensitive Sites.	Significant impact after mitigation for VOC, CO, NO _x , PM ₁₀ , and PM _{2.5} .
AQ-2: Project construction would result in offsite ambient air pollutant concentrations that would exceed the SCAQMD threshold of significance.	Significant impact for PM ₁₀ (24-hour and annual average) and NO ₂ (1-hour and state annual average). Overlap of construction and operations would be significant for PM _{2.5} (24-hour).	MM AQ-1 through MM AQ-8	Significant impact after mitigation for for PM ₁₀ (24-hour average) and NO ₂ (1-hour average).

Table 1-1. Significant and Unavoidable Adverse Environmental Impacts for the Proposed Project			
<i>Environmental Impact</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
AQ-3: The proposed Project would result in operational emissions that exceed 10 tons per year of VOCs or an SCAQMD threshold of significance	Significant impact for NOx in 2015, 2025, and 2027 and VOC in 2027	<p>MM AQ-9. Alternative Maritime Power (AMP).</p> <p>MM AQ-10. Vessel Speed Reduction Program (VSRP).</p> <p>MM AQ-11. Cleaner OGV Engines.</p> <p>MM AQ-12. OGV Engine Emissions Reduction Technology Improvements.</p> <p>MM AQ-13. Yard Tractors at Berths 302-306 Terminal.</p> <p>MM AQ-14. Yard Equipment at Berth 302-306 Railyard.</p> <p>MM AQ-15. Yard Equipment at Berths 302-306 Terminal.</p> <p>MM AQ-16. Truck Idling Reduction Measure.</p> <p>The following lease measures would also be implemented to reduce impacts:</p> <p>LM AQ-1. Periodic Review of New Technology and Regulations.</p> <p>LM AQ-2. Substitution of New Technology.</p>	Significant impact after mitigation for VOC in 2025 and 2027.

Table 1-1. Significant and Unavoidable Adverse Environmental Impacts for the Proposed Project			
<i>Environmental Impact</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
AQ-4: Proposed Project or alternatives operations would result in offsite ambient air pollutant concentrations that exceed SCAQMD threshold of significance.	Significant impact for state and Federal 1-hour and state annual NO ₂ .	MM AQ-9 through MM AQ-16	Significant impact after mitigation for state and Federal 1-hour and state annual NO ₂ .
AQ-7: The proposed Project or alternative would expose receptors to significant levels of toxic air contaminants (TACs).	Significant impact for cancer risk and acute noncancer effects for residential and occupational receptors.	MM AQ-9 through MM AQ-16	Significant impact for cancer risk for residential and occupational receptors. Significant acute hazard impact for occupational receptors.
AQ-9: The proposed Project would produce Greenhouse Gas (GHG) emissions that would exceed the CEQA baseline level.	Significant impact	MM AQ-2 through MM AQ-4, MM AQ-9, MM AQ-10, and MM AQ-16 MM AQ-17. Compact Fluorescent Light Bulbs. MM AQ-18. Energy Audit. MM AQ-19. Recycling. MM AQ-20. Tree Planting.	Significant impact after mitigation
BIOLOGICAL RESOURCES			
BIO-4c: Project operation could introduce non-native species into the Harbor that could substantially disrupt local biological communities.	Significant impact	No feasible mitigation is currently available	Significant impact

Findings Regarding Environmental Impacts Found to Be Less Than Significant after Mitigation

The LAHD Board of Commissioners hereby finds that the following environmental impacts (in Table 1-2) of the proposed Project are less-than-significant after implementation of mitigation measures.

Table 1-2. Significant Impacts that can be Mitigated for the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
BIOLOGICAL RESOURCES			
BIO-1a: Project construction could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	Significant impact (potential) if elegant or Caspian terns use the 41-acre area for nesting during construction	MM BIO-1: Conduct nesting bird surveys and avoid impacts to nesting birds at the Project site. The following standard condition of approval would also be implemented to reduce impacts: SC BIO-1: Avoid marine mammals.	Less than significant after mitigation
GROUND TRANSPORTATION			
TRANS-2: Long-term vehicular traffic associated with the proposed Project may significantly impact a study location volume/capacity ratios or level of service.	Significant impact	MM TRANS-1: Navy Way and Reeves Avenue	Less than significant after mitigation
NOISE			
NOI-1: Project construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	Significant impact	MM NOI-1: Noise Reduction during Pile Driving MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile Driving Equipment, Where	Less than significant after mitigation

Table 1-2. Significant Impacts that can be Mitigated for the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
		Necessary and Feasible	

Findings Regarding Environmental Impacts Found to Be Less Than Significant

The LAHD Board of Commissioners hereby finds that the following environmental impacts (Table 1-3) of the Berths 302-306 [APL] Container Terminal Project are less than significant. Under CEQA, no mitigation measures are required for impacts that are less than significant (14 Cal. Code Regs. § 15126.4(a)(3)).

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
AESTHETICS AND VISUAL RESOURCES			
AES-1: Construction and operation of the proposed Project would not result in an adverse effect on a scenic vista from a designated scenic resource due to obstruction of views.	Less than significant	Mitigation not required	Less than significant
AES-2: Construction and operation of the proposed Project would not substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings along a state scenic highway.	Less than significant	Mitigation not required	Less than significant
AES-3: Construction and operation of the proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings.	Less than significant	Mitigation not required	Less than significant
AES-4: Construction and operation of the proposed Project would not create a new source of substantial light or glare that	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
would adversely affect daytime or nighttime views in the area.			
AIR QUALITY, METEOROLOGY AND GREENHOUSE GASES			
AQ-5: The proposed Project would not generate on-road traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards.	Less than significant	Mitigation not required	Less than significant
AQ-6: The proposed Project would not create an objectionable odor at the nearest sensitive receptor.	Less than significant	Mitigation not required	Less than significant
AQ-8: The proposed Project would not conflict with or obstruct implementation of an applicable AQMP.	Less than significant	Mitigation not required	Less than significant
BIOLOGICAL RESOURCES			
BIO-2a: Project construction would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	Less than significant	Mitigation not required	Less than significant
BIO-3a: Construction activities would not interfere with wildlife movement/migration corridors.	Less than significant	Mitigation not required; however, standard condition of approval SC BIO-1 would further reduce any potential impact.	Less than significant
BIO-4a: Construction activities would not substantially disrupt local biological communities.	Less than significant	Mitigation not required; however, mitigation measure MM BIO-1 and standard condition of approval SC BIO-1 and SC BIO-2 would further reduce any	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
		potential for impact.	
BIO-5: Construction activities would not result in a permanent loss of marine habitat.	No impact	Mitigation not required	No impact
BIO-1b: Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	Less than significant	Mitigation not required; however, mitigation measure MM AQ-10 would further reduce any potential for impact.	Less than significant
BIO-2b: Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	Less than significant for EFH and eelgrass beds . No impact to other natural habitats, special aquatic sites, or plant communities	Mitigation not required	Less than significant for EFH and eelgrass beds . No impact to other natural habitats, special aquatic sites, or plant communities
BIO-3b: Operation of the proposed Project would not interfere with wildlife movement/migration corridors.	No impact	Mitigation not required	No impact
BIO-4b: Operation of the proposed Project would not substantially disrupt local biological communities.	Less than significant	Mitigation not required	Less than significant
CULTURAL RESOURCES			
CR-1: The proposed Project would have a low potential to disturb, damage, or degrade an archaeological and ethnographic	No impact on known resources.	Mitigation not required; however, standard condition of approval SC CR-1: Stop work	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
resource or its setting that is found to be important under the criteria of CEQA.	Less than significant impact on unknown resources.	in area if prehistoric and/or archaeological resources are encountered would further reduce any potential impacts.	
CR-2: The proposed Project would have a low potential to result in a permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.	Less than significant	Mitigation not required	Less than significant
GEOLOGY			
GEO-1: Seismic activity along the Palos Verdes Fault zone or other regional faults, would not produce fault rupture, seismic ground shaking, liquefaction or other seismically induced ground failure that would expose people and structures to substantial risk during the construction and operation periods.	Less than significant	Mitigation not required	Less than significant
GEO-2: Project construction and operation within the Port area would not expose people and structures to substantial risk involving tsunamis or seiches.	Less than significant	Mitigation not required; however, lease measure LM GEO-1: Emergency Response Planning Lease Requirement would further reduce any potential for impact	Less than significant
GEO-3: Project construction would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury from subsidence/soil settlement.	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
GEO-4: Project construction would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury from soil expansion.	Less than significant	Mitigation not required	Less than significant
GEO-5: Project construction would not result in or expose people or property to a substantial risk of landslides or mudflows.	No Impact	Mitigation not required	No Impact
GEO-6: Shallow groundwater, which would cause unstable collapsible soils, may be encountered during excavation, but it would not expose people or structures to substantial risk.	Less than significant	Mitigation not required	Less than significant
GEO-7: Project construction would not result in the destruction, permanent covering or the material and adverse modification of one or more distinct and prominent geologic or topographic features.	No impact	Mitigation not required	No impact
GEO-8: Project construction would not result in the permanent loss of availability of a known mineral resource of regional, statewide, or local significance.	No impact	Mitigation not required	No impact
GEO-9: Project construction would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury from sea level rise.	Less than significant	Mitigation not required	Less than significant
GROUND TRANSPORTATION			
TRANS-1: Project construction would not result in a short-term, temporary increase in truck and auto traffic.	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
TRANS-3: Project operations would not result in a significant increase in related public transit use.	Less than significant	Mitigation not required	Less than significant
TRANS-4: Project operations would not result in increases considered significant related to freeway congestion.	Less than significant	Mitigation not required	Less than significant
TRANS-5: Project operations would not cause a significant impact in vehicular delay at railroad grade crossings within the proposed Project's vicinity or in the region.	Less than significant	Mitigation not required	Less than significant
GROUNDWATER AND SOILS			
GW-1: Project construction would not encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.	Less than significant	Mitigation not required; however, lease measures LM GW-1: Site Remediation and LM GW-2: Contamination Contingency Plan would further reduce any potential for impact.	Less than significant
GW-2: Project construction and operation would not result in expansion of the area affected by contaminants.	Less than significant	Mitigation not required	Less than significant
GW-3: Project construction and operation would not result in a change to potable water levels.	No impact	Mitigation not required	No impact
GW-4: Project construction and operation would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).	No impact	Mitigation not required	No impact
GW-5: Proposed Project construction and operation would not result in violation of regulatory water quality	No impact	Mitigation not required	No impact

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
standards at an existing production well.			
HAZARDS AND HAZARDOUS MATERIALS			
RISK-1a: Construction/demolition activities would not substantially increase the probable frequency and severity of consequences to people or property as a result of accidental release or explosion of a hazardous substance.	Less than significant	Mitigation not required	Less than significant
RISK-2a: Construction/demolition activities would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards.	Less than significant	Mitigation not required	Less than significant
RISK-3a: Construction/demolition activities would not substantially interfere with an existing emergency response or evacuation plan or increase the risk of injury or death.	Less than significant	Mitigation not required	Less than significant
RISK-4a: Construction of the proposed Project would comply with applicable regulations and policies guiding development within the Port.	Less than significant	Mitigation not required	Less than significant
RISK-5a: Tsunami-induced flooding and seismic events could result in fuel releases from demolition/construction equipment or hazardous substances releases from containers, which in turn could result in risks to persons and/or the environment.	Less than significant	Mitigation not required	Less than significant
RISK-6a: A potential terrorist attack could result in adverse consequences to areas near the proposed Project site during the construction period.	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
RISK-1b: Project operations would not increase the probable frequency and severity of consequences to people or property as a result of accidental release or explosion of a hazardous substance.	Less than significant	Mitigation not required	Less than significant
	Less than significant	Mitigation not required	Less than significant
RISK-3b: Project operations would not substantially interfere with any existing emergency response plans or emergency evacuation plans.	Less than significant	Mitigation not required	Less than significant
RISK-4b: Project operations would comply with applicable regulations and policies guiding development within the Port.	Less than significant	Mitigation not required	Less than significant
RISK-5b: Tsunami-induced flooding and seismic events could result in fuel releases from ships or hazardous substances releases from containers, which in turn could result in risks to persons and/or the environment.	Less than significant	Mitigation not required	Less than significant
RISK-6b: A potential terrorist attack could result in adverse consequences to areas near the proposed Project site during the operations period.	Less than significant	Mitigation not required	Less than significant
LAND USE			
LU-1: The proposed Project would be consistent with the adopted land use/density designation in the Community Plan, redevelopment plan, or specific plan for the site.	Less than significant	Mitigation not required	Less than significant
LU-2: The proposed Project would be consistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
LU-3: The proposed Project would not substantially affect the types and/or extent of existing land uses in the Project area.	Less than significant	Mitigation not required	Less than significant
LU-4: The proposed Project would not cause a secondary impact to surrounding land uses.	Less than significant	Mitigation not required	Less than significant
MARINE TRANSPORTATION			
VT-1: Project construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.	Less than significant	Mitigation not required	Less than significant
NOISE			
NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday	Less than significant	Mitigation not required	Less than significant
NOI-3: Project operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the 'normally unacceptable' or 'clearly unacceptable category,' or otherwise by 5 dBA or greater.	Less than significant	Mitigation not required	Less than significant
RECREATION			
REC-1: The proposed Project would not result in a substantial physical deterioration or expansion of existing park or recreational facilities, or include construction of new facilities.	Less than significant	Mitigation not required; however, MM NOI-1: and MM NOI-2 would further reduce impacts.	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
PUBLIC SERVICES AND UTILITIES			
PS-1: The proposed Project would not increase the demand for additional law enforcement officers and/or facilities such that the USCG, LAPD, or Port Police would not be able to maintain an adequate level of service without additional facilities, the construction of which could cause significant environmental effects.	Less than significant	Mitigation not required	Less than significant
PS-2: Project development would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility to maintain service.	Less than significant	Mitigation not required	Less than significant
PS-3: The proposed Project would not result in a substantial increase in utility demands; however, construction and/or expansion of on-site water, wastewater, or storm drain lines would be required to support new terminal development.	Less than significant	Mitigation not required	Less than significant
PS-4: The proposed Project would not generate substantial solid waste, water, and/or wastewater demands that would exceed the capacity of existing facilities in the proposed Project area.	Less than significant	Mitigation not required; however, standard conditions of approval SC PS-1: Recycling Construction Materials and SC PS-2: Using materials with recycling content, and mitigation measure MM AQ-19: Recycling would further reduce any potential impact.	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
PS-5: Project implementation would generate minor increases in energy demands; however, construction of new off-site energy supply facilities and distribution infrastructure would not be required to support proposed Project activities.	Less than significant	Mitigation not required; however, MM AQ-17 and MM AQ-18 would further reduce any potential impact.	Less than significant
WATER QUALITY			
WQ-1a: Project construction would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	Less than significant	Mitigation not required	Less than significant
WQ-1b: Runoff from backland development/redevelopment would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	Less than significant	Mitigation not required	Less than significant
WQ-1c: Accidents during construction would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	Less than significant	Mitigation not required	Less than significant
WQ-2a: Project construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	Less than significant	Mitigation not required	Less than significant
WQ-3a: Project construction would not result in a permanent adverse change in movement of surface water in the Harbor.	Less than significant	Mitigation not required	Less than significant

Table 1-3. Less than Significant Impacts of the Proposed Project			
<i>Environmental Impacts</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
WQ-4a: Project construction would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	Less than significant	Mitigation not required	Less than significant
WQ-1d: Project operation would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	Less than significant	Mitigation not required	Less than significant
WQ-2b: Project operation would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	Less than significant	Mitigation not required	Less than significant
WQ-3b: Project operation would not result in a permanent adverse change in movement of surface water in the Harbor.	Less than significant	Mitigation not required	Less than significant
WQ-4b: Project operation would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	Less than significant	Mitigation not required	Less than significant

Significant Environmental Impacts that are Reduced to Less Than Significant by Mitigation Measures Required in or Incorporated into the Project

The EIS/EIR determines that all significant impacts in the following resource areas would be reduced to less than significant levels through the implementation of appropriate mitigation measures. With mitigation, impacts of the proposed Project in these resource areas are found to be less-than-significant:

- Biological Resources
- Ground Transportation

- Noise

All or some of the potential impacts of the proposed Project in the following resource areas were found to be less than significant prior to mitigation. However, lease measures and/or standard conditions of approval were still identified for all or some of the less than significant impacts in the following areas, to further ensure impacts remain minimal.

- Biological Resources
- Cultural Resources
- Geology
- Groundwater and Soils
- Recreation
- Public Services and Utilities

The Board hereby finds that mitigation measures have been identified in the EIS/EIR that will avoid or substantially lessen significant environmental impacts to a less-than-significant level. The significant impacts and the mitigation measures are as follows. In addition, lease measures and standard conditions of approval are also identified where impacts would be less-than-significant prior to mitigation but are applied to ensure impacts would be minimal.

Biological Resources

As discussed in Section 3.3 of the EIS/EIR, there would be one significant impact to Biological Resources that would be mitigated to less than significant levels as a result of mitigation measures incorporated into the Project. There would also be three less than significant impacts to Biological Resources for which additional conditions or measures are applied. The impacts and mitigation measures (or other measures such as lease measures or standard conditions of approval) are discussed below.

Impact BIO-1a: Construction activities could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Development of the area as backlands is scheduled to start in the first quarter 2013, which overlaps with the nesting season. If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site development could result in a significant impact on nesting. Implementation of mitigation measure **MM BIO-1** would reduce potential impacts to elegant and Caspian tern nesting due to backlands development on the 41-acre site. Concrete pile-driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions, which would be the marine mammals most likely to occur in the vicinity of Pier 300) in the vicinity of pile-driving operations. Impacts would not be significant; however, impacts on marine mammals resulting from noise associated with pile-driving would be further reduced with implementation of standard condition of approval **SC BIO-1**. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect of backlands construction behind Berth

306 potentially overlapping with the nesting season. This mitigation measure would mitigate potential impacts to elegant and/or Caspian tern nesting to a less than significant level. These changes are set forth in **MM BIO-1** below.

In addition, pile-driving is anticipated to result in less than significant disturbances to marine mammals (particularly harbor seals and sea lions that could be present in the vicinity of pile-driving operations). Although a less than significant impact on marine mammals, changes or alterations have been required in, or incorporated into the project to further reduce the effects of noise associated with pile-driving, through standard condition of approval **SC BIO-1**, as set forth below.

MM BIO-1. Conduct nesting bird surveys. *This measure applies only if construction on the 41-acre undeveloped area is to occur between February 15 and September 1. Prior to ground-disturbing activities, a qualified biologist shall conduct surveys for the presence of tern nests on the 41-acre backlands, and within the proposed Project site that contains potential nesting bird habitat. Surveys shall be conducted no later than 1 week prior to the clearing, removal, or grubbing of any vegetation or ground disturbance. If active nests of species protected under the MBTA and/or similar provisions of the California Fish and Game Code (i.e., native birds including but not limited to the black-crowned night heron) are located, then a barrier installed at a 50–100 foot radius from the nest(s) shall be established. The barrier will remain until a qualified biologist determines that the young have fledged or the nest is no longer active.*

SC BIO-1. Avoid marine mammals. *Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the vibratory or “soft start” of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the wharf extension shall include establishment of a safety zone, and the area surrounding the operations will be monitored by a qualified marine biologist for pinnipeds. A 100-meter-radius safety zone will be established around the pile-driving site and monitored for marine mammals. As the pile-driving site will move with each new pile, the 100-meter safety zone shall move accordingly.*

Prior to commencement of pile-driving, observers on shore or by boat will survey the safety zone to ensure that no marine mammals are seen within the zone before pile-driving of a pile segment begins. If a marine mammal is observed within 10 meter of pile-driving operations, pile-driving shall be delayed until the marine mammals moves out of the area. If a marine mammal in the 100-meter safety zone is observed, but more than 10 meter away, the contractor shall wait at least 15 minutes to commence pile-driving. If the marine mammal has not left the 100-meter safety zone after 15 minutes, pile-driving can commence with a “soft start”. This 15-minute criterion is based on a study indicating that pinnipeds dive for a mean time of 0.50 minutes to 3.33 minutes; the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure the animal has left the proposed Project vicinity.

If marine mammals enter the safety zone after pile-driving of a segment has begun, pile-driving shall continue. The biologist shall monitor and record the species and number of individuals observed, and make note of their behavior patterns. If the animal appears distressed, and if it is operationally safe to do so, pile-driving shall cease until the animal leaves the area. Prior to the initiation of each new pile-driving episode, the area shall again be thoroughly surveyed by the biologist.

Rationale for Finding

With implementation of **MM BIO-1**, residual impacts as a result of proposed Project construction activities would be less than significant. In addition, construction noise impacts to marine mammals would remain less than significant prior to and after implementation of **SC BIO-1**.

Impact BIO-3a: Construction activities would not interfere with wildlife movement/migration corridors.

Wharf construction would not result in a significant impact due to interference with wildlife migration or movement; however, sound pressure from pile-driving could cause mortality of fish in the Coastal Pelagics Fishery Management Plan. While such impacts are not considered significant due to the limited potential impact area, with implementation of standard condition of approval **SC BIO-1**, the pile-driving would initiate with a soft start when marine mammals are present, which would minimize potential impacts to fish.

Finding

Pile-driving is anticipated to result in less than significant impacts related to fish mortality. Although a less than significant impact is anticipated, changes or alterations have been required in, or incorporated into, the Project to further reduce the effects of noise associated with pile-driving, through standard condition of approval **SC BIO-1**, as set forth under **Impact BIO-1** above.

Rationale for Finding

With implementation of **SC BIO-1**, pile driving noise impacts to fish would be less than significant.

Impact BIO-4a: Construction activities would not substantially disrupt local biological communities.

Pile driving activities at the proposed Project site could cause short-term impacts on individual marine mammals and fishes (including those with designated EFH) in the immediate vicinity of pile-driving. However, no substantial disruption of biological communities would result from proposed Project construction, and impacts are considered less than significant.

Finding

Pile-driving is anticipated to result in less than significant impacts to marine mammals and fishes. Although a less than significant impact, changes or alterations have been required in, or incorporated into the project to further reduce the effects of noise associated with pile-driving, through standard condition of approval **SC BIO-1**, as set forth under **Impact BIO-1** above. Standard condition of approval **SC BIO-2** will be implemented to provide notification to the National Marine Fisheries Service. Mitigation measure **MM BIO-1**, which will be implemented as mitigation for **Impact BIO-1a**, will further reduce this less than significant impact.

***SC BIO-2:** The Los Angeles Harbor Department (LAHD) will notify the National Marine Fisheries Service (NMFS) no less than 14 calendar days prior to commencing construction, dredging, and disposal operations associated with the proposed Project. LAHD will also notify NMFS no less than five calendar days prior to completion of construction, dredging, and disposal operations*

Rationale for Finding

Pile driving noise impacts to marine mammals and fishes would remain less than significant prior to and after implementation of **SC BIO-1**.

Impact BIO-1b: Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Project operations would result in an increase in vessel traffic would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. Although it is considered less than significant under CEQA because of the low probability of vessel strikes, any increase in vessel traffic caused by the proposed Project may incrementally increase the potential for whale strikes.

Finding

Even though potential impacts due to vessel strikes are considered less than significant, implementation of mitigation measure **MM AQ-10** as set forth below would further reduce the potential for vessel collision with marine mammals.

***MM AQ-10: Vessel Speed Reduction Program.** All ships calling at Berths 302-306 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule:*

- 2014 and thereafter: 95 percent

Rationale for Finding

Potential impacts to state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern due to potential vessel collisions with a marine mammal or sea turtle would remain less than significant prior to and after implementation of **MM AQ-10**.

Cultural Resources

As discussed in Section 3.4 of the Draft EIS/EIR, there would be one less than significant impact to Cultural Resources for which an additional condition is applied. The standard condition of approval is discussed below.

Impact CR-1: The proposed Project would have a low potential to disturb, damage, or degrade an archaeological and ethnographic resource or its setting that is found to be important under the criteria of CEQA.

No prehistoric or archaeological resources eligible for listing in the NRHP or CRHR are recorded within the proposed Project area. The proposed Project is located on imported/modern fill (i.e., dredged material), such that the probability of encountering intact, unknown archaeological and ethnographic resources is remote. Given the fact that no archaeological resources have been identified within the proposed Project area during previous archaeological investigations, and an NAHC search of their Sacred Lands File search (and coordination with nine Native Americans contacts) did not indicate the presence of ethnographic resources in the immediate proposed Project area, the potential for impacting archaeological and ethnographic resources is considered to be extremely low in areas requiring activities that may disturb surface soils, and significant impacts to archaeological resources are not expected.

Finding

Although the potential for impacts on unknown archaeological cultural resources is low, the following standard condition of approval is provided in the unlikely event unknown, intact, potentially significant on-land archaeological resources eligible for listing in the NRHP, the

CRHR, or otherwise considered a unique or important archaeological resource under CEQA are encountered during construction. Changes or alterations have been required in, or incorporated into, the project that substantially lessen the less than significant environmental effect as identified in the Final EIR. These changes are set forth in standard condition of approval **SC CR-1** as set forth below.

SC CR-1: Stop Work in Area if Prehistoric and/or Archaeological Resources are Encountered. *In the unlikely event that any artifact, or an unusual amount of bone, shell, or non-native stone is encountered during construction, work shall be immediately stopped, the area secured, and work relocated to another area until the found materials can be assessed by individuals competent to assess their value. Examples of such cultural materials might include concentrations of grinding stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historical trash pits containing bottles and/or ceramics; or structural remains. The contractor shall stop construction within 10 meters (30 feet) of the exposure of these finds until a qualified archaeologist can be retained by the Port to evaluate the find (see 36 CFR 800.11.1 and California Code of Regulations, Title 14, Section 15064.5(f)). If the resources are found to be significant, they shall be avoided or shall be mitigated consistent with Section 106 or State Historic Preservation Officer Guidelines. All construction equipment operators shall attend a preconstruction meeting presented by a professional archaeologist retained by the Port that shall review types of cultural resources and artifacts that would be considered potentially significant, to ensure operator recognition of these materials during construction.*

Prior to beginning construction, the Port shall meet with applicable Native American Groups, including the Gabrieliño/Tongva Tribal Council, to identify areas of concern. A trained archaeologist shall monitor construction at identified areas. In addition to monitoring, a treatment plan shall be developed in conjunction with the Native American Groups to establish the proper way of extracting and handling all artifacts in the event of an archaeological discovery.

Rationale for Finding

In the highly unlikely event that intact archaeological and/or human remains are identified during construction, **SC CR-1** would ensure that the materials and remains were evaluated and mitigated according to professional standards, as well as state law. Residual impacts would remain less than significant.

Geology

As discussed in Section 3.5 of the EIS/EIR, there would be one less than significant impact to Geology for which an additional lease condition or measure is applied. The lease measure is discussed below.

Impact GEO-2: Construction and operation of the proposed Project within the Port area would not expose people and structures to substantial risk involving tsunamis or seiches.

Impacts due to tsunamis and seiches are typical for the entire California coastline and the construction and operation of the proposed Project would not increase them. The proposed Project site's elevation is approximately 15 ft above MLLW; therefore, no substantial risk of flooding from tsunamis and seiches are likely at the proposed Project site. In-water construction activities could be subject to risk should a large tsunami occur during construction activities,

however, the likelihood of this occurring is remote. LAHD's Risk Management Plan contains applicable risk management measures and policies (LAHD, 1983). Also, as discussed further in Section 3.8, Hazards and Hazardous Materials, the LAHD has a Port-wide emergency notification system in place to warn of tsunamis or other hazards by telephone/email/text alerts, which would serve to reduce potential risks (Malin pers. comm., 2011). LAHD has also implemented measures to minimize impacts from seiches or tsunamis, such as the breakwater and constructing facilities at adequate elevation.

Based on the relative risk of substantial damage or injury involving tsunamis or seiches, impacts during construction and operations would be less than significant under CEQA.

Finding

Although significant impacts related to the risk of substantial damage or injury involving tsunamis or seiches would not occur, lease measure **LM GEO-1**, as set forth below, would further reduce potential impacts.

***LM GEO-1: Emergency Response Planning Lease Requirement:** The terminal operator will work with Port engineers and Port police to develop tsunami response training and procedures to assure that construction and operations personnel would be prepared to act in the event of a large seismic event. Such procedures would include immediate evacuation requirements in the event that a large seismic event is felt at the Project site, as part of overall emergency response planning for the proposed Project.*

Rationale for Finding

The proposed Project site's elevation is approximately 15 ft above MLLW; therefore, no substantial risk of flooding from tsunamis and seiches are likely at the proposed Project site. Because of this, potential impacts related to a tsunami or seiche would be less than significant prior to and after implementation of **LM GEO-1**.

Ground Transportation

As discussed in Section 3.6 of the Draft EIS/EIR, there would be one significant impact to Ground Transportation and Circulation that would be mitigated to less than significant levels as a result of mitigation measures incorporated into the Project. The impacts and mitigation measures are discussed below.

Impact TRANS-2: Long-term vehicular traffic associated with the Proposed Project may significantly impact one study location volume/capacity ratio or level of service.

Based on the results of the traffic study as presented in Tables 3.6-19 to 3.6-23 and the worksheets set forth in Appendix H1 of the Draft EIS/EIR, operation of the proposed Project would result in significant circulation system impacts relative to future CEQA baseline conditions at the following study location:

- Navy Way and Reeves Avenue – 2020 (mid-day peak hour), 2025 (A.M. and mid-day peak hours), 2027 (A.M., and mid-day peak hours)

Finding

Changes or alterations have been required in, or incorporated into the project that avoid or substantially lessen the significant environmental effect identified in the Final EIR. This mitigation measure would fully offset proposed Project impacts to intersection volume/capacity delays. These changes are set forth below in **MM TRANS-1**.

MM TRANS-1: Navy Way and Reeves Avenue - Re-stripe the southbound (and eastbound approach to accommodate the southbound dual right-turns) to provide a right-turn lane, a shared through/right turn lane, and a through lane on the southbound approach. This mitigation would only be constructed when the intersection operates at LOS E or worse. The Port will monitor the LOS of this location as part of its ongoing port-area intersection monitoring activities.

Rationale for Finding

Mitigation Measure **MM TRANS-1** would mitigate the significant traffic impacts such that with implementation of **MM TRANS-1**, residual impacts as a result of Project operations would be less than significant. Because **MM TRANS-1** is largely a striping activity with minimal construction, implementation of **MM TRANS-1** will not result in significant secondary impacts.

Groundwater and Soils

As discussed in Section 3.7 of the Draft EIS/EIR, there would be one less than significant impact to Groundwater and Soils for which additional lease conditions or measures are applied. The impacts and lease measures are discussed below.

Impact GW-1: Proposed Project construction activities would not encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

Excavations associated with upland improvements could encounter previously unknown soil and/or groundwater contamination. Such discoveries could result in adverse impacts to construction and operations personnel. However, all contaminated soil or groundwater encountered during construction of the proposed Project would be handled, transported, remediated, and/or disposed of in accordance with all applicable federal, state, and local laws and regulations and in accordance with the regulatory lead agency (e.g., DTSC, Los Angeles RWQCB) and LAHD lease measures pertaining to site remediation and development of contamination contingency plan. Compliance with lease measures would ensure that should contaminated material during be encountered on-site, personnel on-site would not have short-term and/or long-term exposure to toxic substances or other contaminants associated with historical uses of the Port. Therefore, the impact would be less than significant under CEQA.

Finding

Although significant impacts related to the potential for exposure to underlying contaminants would not occur, lease measures **LM GW-1** and **LM GW-2** would further reduce potential impacts.

LM GW-1: Site Remediation Lease Requirement. *Unless otherwise authorized by the lead regulatory agency for any given site, the LAHD and/or Tenant (i.e., APL) shall address all contaminated soils within proposed Project boundaries discovered during demolition and grading activities. Contamination existing at the time of discovery shall be the responsibility of the past and/or current property owner. Contamination as a result of the construction process shall be the responsibility of the Tenant and/or Tenant contractors. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3 (above) and Section 3.8.3 (in Section 3.8, Hazards and Hazardous Materials), and as directed by the lead regulatory agency for the site (such as the Los Angeles RWQCB or DTSC).*

Soil removal shall be completed such that remaining contamination levels are below risk-based health screening levels for industrial sites established by OEHHA and/or applicable action levels (e.g., Environmental Screening Levels, Preliminary Remediation Goals) established by the lead regulatory agency with jurisdiction over the site. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) and/or risk-based soil assessments for industrial sites, but are subject to the review of the lead regulatory agency and LAHD. Excavated contaminated soil shall be properly disposed of off-site unless use of such material on-site is beneficial to construction and approved by the agency overseeing environmental concerns. All imported soil to be used as backfill in excavated areas shall be sampled to ensure that it is suitable for use as backfill at an industrial site.

LM GW-2: Contamination Contingency Plan Lease Requirement. *The following contingency plan shall be implemented to address contamination discovered during demolition, grading, and construction.*

- a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Soil suspected of contamination shall be segregated from other soil. In the event soil suspected of contamination is encountered during construction, the contractor shall notify the LAHD Project Engineer. The LAHD shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material. Continued work at a contaminated site shall require the approval of the LAHD Project Engineer.*
- b) Excavation of VOC-impacted soil may require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.*
- c) The remedial option(s) selected shall be dependent upon a suite of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both off-site and on-site remedial options may be evaluated.*
- d) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the impacted area(s) within the boundaries of the construction area shall be remediated to the satisfaction of the LAHD and the lead regulatory agency for the site. The LAHD Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.*
- e) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the LAHD Project Manager within 60 days of project completion.*
- f) In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material must be trained in accordance with USEPA and Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations or demonstrate they have completed the appropriate training. Training must provide protective measures and practices to reduce or eliminate hazardous materials/waste hazards at the work place.*

- g) *When impacted soil must be excavated, air monitoring will be conducted as appropriate for related emissions adjacent to the excavation.*

All excavations shall be backfilled with structurally suitable fill material that is free from contamination.

Rationale for Finding

Any contaminated materials encountered during Project construction would be handled, transported, remediated, and/or disposed of in accordance with all applicable federal, state, and local laws and regulations and in accordance with the regulatory lead agency requirements. Because of this, potential impacts related to encountering contaminated soil or groundwater during construction would be less than significant prior to and after implementation of lease measures **LM GW-1** and **LM GW-2**.

Noise

As discussed in Section 3.11 of the Draft EIS/EIR, there would be one significant impact related to Noise generated during Project construction. This impact would be mitigated to less than significant levels as a result of mitigation measures incorporated into the Project. The impacts and mitigation measures are discussed below.

Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.

Noise produced by pile driving during wharf construction would increase average ambient noise levels at Reservation Point by 5 dBA over existing levels. Although the elevated noise levels would be temporary, they are considered significant under CEQA.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant noise impact resulting from pile driving during wharf construction. The mitigation measures would mitigate potential noise impacts to receptors at Reservation Point to a less than significant level. These changes are set forth in mitigation measures **MM NOI-1** and **MM NOI-2** below.

MM NOI-1: Noise Reduction during Pile Driving. *The contractor shall be required to use a pile driving system, such as a Bruce hammer (with silencing kit), an IHC Hydrohammer SC series (with sound insulation system), or equivalent silenced hammer, which is capable of limiting maximum noise levels at 50 ft from the pile driver to 104 dBA, or less, for wharf construction. With implementation of standard condition of approval SC BIO-1, the pile driving would initiate with a soft start, in which the hammer is operated at a reduced energy, followed by a waiting period. The soft start technique would induce marine mammals and birds to leave the immediate area before pile hammer reaches full energy. Refer to Section 3.3, Biological Resources, for information on soft start of pile driving activities.*

MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile Driving Equipment, Where Necessary and Feasible. *Erect temporary noise attenuation barriers suitable for pile driving equipment as needed. The barriers should be installed directly between the equipment and the nearest noise sensitive use to the construction site. The need for and feasibility of noise attenuation barriers should be evaluated on a case-by-*

case basis considering the distance to noise sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations.

Rationale for Finding

With implementation of **MM NOI-1** and **MM NOI-2**, residual noise impacts as a result of pile driving activities would be less than significant.

Recreation

As discussed in Section 3.12 of the Draft EIS/EIR, there would be one less than significant impact related to Recreation that would be further reduced by implementing other mitigation measures required under Noise above. Impact and mitigation measures are discussed below.

Impact REC-1: The proposed Project would not result in a substantial physical deterioration or expansion of existing park or recreational facilities, or include construction of new facilities.

The nearest pleasure craft slips are located in the Al Larson Marina, which is located along the west side of Fish Harbor and approximately 900 ft west of the proposed Project site (west boundary). Some construction activities would be audible from the Al Larson Marina. The noise impact analysis provided in Section 3.11, Noise, identifies sensitive noise receptor locations in the Port that could potentially be impacted by the proposed Project. Nighttime dredging of Berth 306 would result in average noise levels that exceed the ambient levels at the Al Larson Marina, located 1,200 ft from the proposed Project. However, the increases would be less than 2 dBA, which is below the significance criteria (refer to **Impact NOI-2** of Section 3.11, Noise). Even though construction-related noise would be less than significant and would not violate Section 41.40 of the LAMC Noise Ordinance, it would be considered an indirect effect to the recreational activities at the Al Larson Marina.

Finding

Although construction-related noise impacts to the Al Larson Marina (the nearest recreational resource) would not be significant, **MM NOI-1** (which requires the contractor to use a pile driving system with a sound insulation system) and **MM NOI-2** (which requires the contractor to erect temporary noise attenuation barriers suitable for pile driving equipment, as necessary), would be implemented, as set forth under **Impact NOI-1** above.

Rationale for Finding

Residual noise impacts to the Al Larson Marina as a result of pile driving activities would be less than significant before and after implementation of **MM NOI-1** and **MM NOI-2**.

Public Services and Utilities

As discussed in Section 3.13 of the Draft EIS/EIR, there would be two less than significant impacts to Public Services and Utilities that would be further reduced by implementing other standard conditions of approval and/or mitigation measures required under other resource impact areas. The impacts and standard conditions or approval and/or mitigation measures are discussed below.

Impact PS-4: The proposed Project would not generate substantial solid waste, water, and/or wastewater demands that would exceed the capacity of existing facilities in the proposed Project area.

A substantial amount of debris during construction is not anticipated to be generated because, with the exception of the Roadability Facility and existing out-gate, demolition or substantial excavation would not be required, and because construction debris is generally reused or recycled where economically feasible. Because adequate landfill capacity would be available through the Project horizon year of 2027, Project construction would not result in a significant impact to landfill capacity.

Finding

Although significant impacts from construction debris on landfill capacity would not occur, standard conditions of approval **SC PS-1** and **SC PS-2** have been added to further reduce the amount of solid waste generated. **SC PS-1** would be implemented to minimize the amount of solid waste requiring transportation to a landfill that would be generated during proposed Project construction. **SC PS-2** is provided not to mitigate an identified environmental impact, but rather to support development of recycled material markets, to the extent feasible. In addition, Air Quality, Meteorology, and Greenhouse Gases mitigation measure **MM AQ-19** requires that a minimum of 40 percent of all waste generated in all terminal buildings is recycled by 2014 and 60 percent of all waste generated in all terminal buildings is recycled by 2016. This mitigation measure, applied under **Impact AQ-9** (Greenhouse Gases) and reiterated here, would further reduce solid waste generation.

***SC PS-1: Recycling of Construction Materials.** Demolition and/or excess construction materials shall be separated on-site for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials shall be provided on-site.*

***SC PS-2: Materials with Recycled Content.** Materials with recycled content shall be used in Project construction where feasible. Chippers on-site during construction shall be used to further reduce excess wood for landscaping cover.*

***MM AQ-19: Recycling.** The tenant shall ensure a minimum of 40 percent of all waste generated in all terminal buildings is recycled by 2014 and 60 percent of all waste generated in all terminal buildings is recycled by 2016. Recycled materials shall include: (a) white and colored paper; (b) post-it notes; (c) magazines; (d) newspaper; (e) file folders; (f) all envelopes including those with plastic windows; (g) all cardboard boxes and cartons; (h) all metal and aluminum cans; (i) glass bottles and jars; and; (j) all plastic bottles.*

Rationale for Finding

Adequate landfill capacity would be available through the Project horizon year of 2027, and Project construction would be completed prior to then. Residual impacts to landfill capacity from Project construction would therefore be less than significant prior to or after implementation of **SC PS-1**, **SC PS-2**, and **MM AQ-19**.

Impact PS-5: Implementation of the proposed Project would generate minor increases in energy demands; however, construction of new off-site energy supply facilities and distribution infrastructure would not be required to support proposed Project activities.

Project operations would generate demands for electricity (in excess of demand under the CEQA baseline) associated with crane operations, facility and backlands operations, site and security lighting, new on-site buildings, general site maintenance, and AMP at Berth 306. Electrical power for Berths 302-305 conventional terminal combined with the automated backlands of Berth 306 would be approximately 8,161,920 kWh more per year (a 56 percent increase) compared to the electricity usage for the conventional terminal of Berths 302-306. However, the electric automated operations could reduce diesel power by up to approximately 1,131,034 kWh per year. With the increase in electricity usage and decline in diesel power usage that would occur with automated backlands at Berth 306 combined with conventional operations at Berths 302-305, the energy demand would be approximately 15 percent higher than would occur under conventional operations for the entire terminal. However, LADWP has ample generation capacity to meet the needs of its customers, including the proposed Project, and will continue to do so with proper planning and development of facilities in accordance with the City Charter. Because LADWP is required by the Charter to provide a reliable supply of electricity for its customers and because LADWP is moving toward increasing renewable energy supplies in its resource portfolio, the electricity demand of the proposed Project by itself would not result in the need to construct a new off-site power station or facility (for a discussion of cumulative impacts related to electricity demand, see Chapter 4 of the Draft EIS/EIR). Based on this, the proposed Project would not result in significant impacts related to increased energy usage.

Finding

The two terminal buildings to be built as part of the proposed Project will meet, at minimum, LEED silver certification. The LEED buildings include energy conservation measures such as double-paned windows and dimming fluorescent lights. Even though impacts associated with energy usage are considered less than significant, implementation of mitigation measure **MM AQ-17** and **MM AQ-18**, as applied under **Impact AQ-9** and reiterated here, would further reduce energy demands.

***MM AQ-17: Compact Fluorescent Light Bulbs.** All interior buildings on the premises shall exclusively use fluorescent light bulbs, compact fluorescent light bulbs, or a technology with similar energy-saving capabilities.*

***MM AQ-18: Energy Audit.** The tenant shall conduct an energy audit by a third party of its choice every 5 years and install innovative power saving technology (1) where it is feasible; and (2) where the amount of savings would be reasonably sufficient to cover the costs of implementation. Such systems help to maximize usable electric current and eliminate wasted electricity, thereby lowering overall electricity use.*

Rationale for Finding

Electricity infrastructure would be adequate to support the proposed Project, and adequate energy supplies would be available. Therefore, residual impacts would be less than significant prior to and after implementation of mitigation measures **MM AQ-17** and **MM AQ-18**.

Significant and Unavoidable Environmental Impacts That Cannot Be Reduced to Less Than Significant

Unavoidable Significant Impacts. The EIS/EIR concludes that unavoidable significant impacts to the following environmental resources would occur if the proposed Project were implemented.

- Air Quality, Meteorology and Greenhouse Gases
- Biological Resources

Chapter 2 (Responses to Comments) of the Final EIS/EIR contains the comments received on the Draft EIS/EIR that also includes suggested mitigation measures and/or alternatives to reduce significant and unavoidable impacts. In addition, revised mitigation measures and addition of a standard condition of approval based on comments received on the Draft EIS/EIR are provided in Chapter 3 (Modifications to the Draft EIS/EIR) of the Final EIS/EIR. The discussion below indicates whether the proposed mitigation measure and/or alternative has been added to the Final EIS/EIR and/or required in, or incorporated into, the Project. The Board has determined that certain proposed mitigation measures and/or alternatives are infeasible in light of specific economic, legal, social, technological, and other considerations and, therefore, have not been required in, or incorporated into, the Project. The evidence of such infeasibility is explained below within the discussions of the significant impacts for which the measures and/or alternatives were suggested.

Air Quality, Meteorology and Greenhouse Gases

As discussed in Section 3.2 of the EIS/EIR, there would be six unavoidable significant impacts to air quality, meteorology and greenhouse gases related to construction and operation as a result of the proposed Project. The impacts and mitigation measures are discussed below.

Impact AQ-1: The proposed Project would result in construction-related emissions that exceed an SCAQMD threshold of significance.

The unmitigated peak daily construction emissions would exceed the South Coast Air Quality Management District (SCAQMD) daily emission thresholds for VOC, CO, NO_x, PM₁₀, and PM_{2.5} under CEQA. Therefore, unmitigated proposed Project construction emissions would be significant under CEQA for VOC, CO, NO_x, PM₁₀, and PM_{2.5} prior to mitigation.

Finding

The EIS/EIR discussed impacts to regional air quality that would result during construction activities associated with the proposed Project (**Impact AQ-1**). Implementation of the mitigation measures below would substantially lessen emissions from criteria pollutants associated with construction of the proposed Project, as listed below in Table AQ-1. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into the project that avoid or substantially lessen the significant environmental effect identified in the Final EIR. However, emissions of VOC, CO, NO_x, PM₁₀, and PM_{2.5} during construction would remain significant. Incorporation of mitigation measures, however, would still not reduce construction emissions below significance. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, as explained below.

Table AQ-1: Peak Daily Emissions Associated with Proposed Project Construction Activities – Proposed Project Without Mitigation

Emission Source	Peak Daily Emissions (lb/day) ^d					
	VOC	CO	NO _x	SO _x	PM ₁₀ ^a	PM _{2.5} ^a
Project Year 2012						
Phase 1a - Wharf Construction	73	268	692	1	113	45
Phase 1b - Backland Construction	37	153	331	0	53	22
Phase 1h - Crane Installation ^b	101	95	794	130	97	90
Phase 1e - Building Construction	13	54	127	0	23	9
Phase 1f - Reefer Area Expansion	13	52	119	0	11	6
Phase 1g - Utility Infrastructure	5	18	49	0	2	2
All Phases - Worker Commute	1	11	1	0	16	4
Peak Daily 2012 – CEQA Impact^c	243	651	2,113	131	313	176
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	Yes	Yes	No	Yes	Yes
Project Year 2013						
Phase 1a - Wharf Construction	73	268	692	1	112	45
Phase 1b - Backland Construction	37	153	331	0	53	22
Phase 1c - AMP Installation (Berth 306)	5	20	46	0	7	3
Phase 1e - Building Construction	13	54	127	0	22	9
Phase 2 - Grading, Paving, Striping	12	47	116	0	13	6
All Phases - Worker Commute	1	11	1	0	16	4
Peak Daily 2013 – CEQA Impact^c	141	553	1,313	2	223	88
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	Yes	Yes	No	Yes	Yes

Notes:

- a) Emissions of PM₁₀ and PM_{2.5} assume that fugitive dust is controlled in accordance with SCAQMD Rule 403 by watering disturbed areas 3 times per day.
- b) One general cargo ship delivers four shoreside cranes in Phase I
- c) Emissions might not add precisely due to rounding. For more explanation, refer to the discussion in Section 3.2.4.1 of the Draft EIS/EIR.
- d) The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Construction is assumed to occur during most of Year 2012. This is assumed as it is conservative (i.e. worst-case). Future studies might use updated data, assumptions, and emission factors that are not currently available.
- e) The CEQA Impact equals total Project construction emissions minus CEQA baseline construction emissions (which are zero).

MM AQ-1: Harbor Craft Used during Construction

1. All harbor craft with C1 or C2 marine engines must utilize a USEPA Tier-3 engine, or cleaner. This measure shall be met, unless the contractor is able to provide proof that one of the following circumstances exists:
 - A piece of specialized equipment is unavailable in a controlled form, or within the required Tier level, within the state of California, including through a leasing agreement;
 - A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the project, but the application process is not yet approved, or the application has been approved, but funds are not yet available;
 - A contractor has ordered a control device for a piece of equipment planned for use on the project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the project has the controlled equipment available for lease.
2. All dredging equipment shall be electric, unless contractor can demonstrate that such equipment is not feasible for a specific activity.

MM AQ-2: Cargo Ships Used During Construction

1. All ships & barges used primarily to deliver construction-related materials to a LAHD-contractor construction site shall comply with the expanded Vessel Speed Reduction Program (VSRP) of 12 knots between 40 nautical miles (nm)⁵ from Point Fermin and the Precautionary Area.
2. These ships must also use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin. (This condition is superseded by CARB regulations for ships operating within 24 nm of the shoreline where the maximum allowable sulfur content is 0.1 percent.)

MM AQ-3: Fleet Modernization for On-Road Trucks Used During Construction

1. Trucks hauling material such as debris or any fill material will be fully covered while operating off Port property.
2. Idling will be restricted to a maximum of 5 minutes when not in use.
3. USEPA Standards:
 - a. For On-road trucks with a gross vehicle weight rating (GVWR) of at least 19,500 pounds: Comply with USEPA 2007 on-road emission standards for

⁵ The current VSRP is a voluntary program where oceangoing vessels slow to 12 knots when within 20 nautical miles of the entrance to the Harbor, thus reducing emissions from main propulsion engines. Mitigation measure MM AQ-2 would require all construction vessels associated with the proposed Project to comply with a more stringent requirement of reducing speeds when within 40 nautical miles of the Harbor entrance.

PM₁₀ and NO_x (0.01 grams per brake horsepower-hour (g/bhp-hr) and 1.2 g/bhp-hr or better, respectively).

MM AQ-4: Fleet Modernization for Construction Equipment (except Vessels, Harbor Craft and On-Road Trucks)

1. *Construction equipment will incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards.*
2. *Idling will be restricted to a maximum of 5 minutes when not in use.*
3. *Equipment Engine Specifications:*
 - a. *Tier 4 equipment shall be considered based on availability at the time the construction bid is issued.*
 - b. *At a minimum, prior to January 1, 2015, all off-road diesel-powered construction equipment greater than 50 ph will meet Tier 3 off-road emission standards at a minimum. In addition, this equipment will be retrofitted with a CARB-verified Level 3 DECS.*
 - c. *From January 1, 2015 on: All off-road diesel-powered construction equipment greater than 50 hp will meet Tier 4 off-road emission standards at a minimum*

MM AQ-5: Construction Best Management Practices (BMPs). LAHD shall implement BMPs to reduce air emissions from all LAHD-sponsored construction projects, including:

1. *Use of diesel oxidation catalysts and catalyzed diesel particulate traps;*
2. *Maintain equipment according to manufacturers' specifications;*
3. *Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of 5 minutes when not in use;*
4. *Install high-pressure fuel injectors on construction equipment vehicles;*
5. *Maintain a minimum buffer zone of 300 meters between truck traffic and sensitive receptors;*
6. *Improve traffic flow by signal synchronization;*
7. *Enforce truck parking restrictions;*
8. *Provide on-site services to minimize truck traffic in or near residential areas, including, but not limited to, the following services: meal or cafeteria services, automated teller machines, etc;*
9. *Re-route construction trucks away from congested streets or sensitive receptor areas;*
10. *Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site;*
11. *Use electric power in favor of diesel power where available.*

MM AQ-6: Additional Fugitive Dust Controls.

1. SCAQMD Rule 403 requires a Fugitive Dust Control Plan be prepared and approved for construction sites. Construction contractors are required to obtain a 403 Permit from SCAQMD prior to construction.
2. Applicable Rule 403 measures/BMPs to reduce dust shall be included in the contractor's Fugitive Dust Control Plan, at a minimum.

MM AQ-7: General Mitigation Measure. For any of the above mitigation measures (MM AQ-1 through MM AQ-6), if a CARB-certified technology becomes available and is shown to be as good as or better in terms of emissions performance than the existing measure, the technology could replace the existing measure pending approval by the Port. Measures will be set at the time a specific construction contract is advertised for bids.

MM AQ-8: Special Precautions near Sensitive Sites. All construction activities located within 1,000 feet of sensitive receptors (defined as schools, playgrounds, daycares, and hospitals) shall notify each of these sites in writing at least 30 days before construction activities begin.

Rationale for Finding

Changes or alterations in the form of mitigation measures have been incorporated into the Project in the form of **MM AQ-1 through MM AQ-8**, which lessen significant construction emissions. Although reduced as a result of the mitigation measures, construction emissions remain significant and unavoidable. Table AQ-2 below presents the construction emissions and thresholds mitigation (Table AQ-1 above presents the emissions prior to mitigation).

Table AQ-2: Peak Daily Emissions Associated with Proposed Project Construction Activities – Proposed Project With Mitigation

Emission Source	Daily Emissions (lb/day) ^d					
	VOC	CO	NO _x	SO _x	PM ₁₀ ^a	PM _{2.5} ^a
Project Year 2012						
Wharf Construction	69	260	334	1	87	21
Backland Construction	37	152	218	0	40	9
Crane Installation ^b	72	95	598	26	78	72
Building Construction	13	54	109	0	19	5
Reefer Area Expansion	13	52	90	0	7	2
Utility Infrastructure	5	18	41	0	0	0
Worker Commute	1	11	1	0	16	4
Peak Daily 2012 – CEQA Impact^{c,e}	211	641	1,392	27	246	114
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	Yes	Yes	No	Yes	Yes
Project Year 2013						
Wharf Construction	69	260	334	1	87	21

Table AQ-2: Peak Daily Emissions Associated with Proposed Project Construction Activities – Proposed Project With Mitigation

Emission Source	Daily Emissions (lb/day) ^d					
	VOC	CO	NO _x	SO _x	PM ₁₀ ^a	PM _{2.5} ^a
Backland Construction	37	152	218	0	40	9
AMP Installation (Berth 306)	5	20	42	0	5	1
Building Construction	13	54	109	0	19	5
Grading, Paving, Striping	12	47	89	0	10	3
Worker Commute	1	11	1	0	16	4
Peak Daily 2013 – CEQA Impact^{c,e}	137	543	794	2	175	44
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	No	Yes	No	Yes	No

Notes:

- a) Emissions of PM₁₀ and PM_{2.5} assume that fugitive dust is controlled in accordance with SCAQMD Rule 403 to achieve a 60 percent reduction relative to uncontrolled levels..
- b) One general cargo ship delivers four shoreside cranes in Phase I
- c) Emissions might not add precisely due to rounding. For more explanation, refer to the discussion in Section 3.2.4.1 of the Draft EIS/EIR.
- d) The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Construction is assumed to occur during most of Year 2012. This is assumed as it is conservative (i.e. worst-case). Future studies might use updated data, assumptions, and emission factors that are not currently available. The CEQA Impact equals total Project construction emissions minus CEQA baseline construction emissions (which are zero).

While the mitigation measures presented in the Final EIR reduce emissions, emissions would still exceed SCAQMD emissions for VOC, CO, NO_x, PM₁₀, and PM_{2.5} during construction. Mitigation measures **MM AQ-1 through MM AQ-8** represent feasible means to reduce air pollution impacts from proposed construction sources.

Emissions will largely come from diesel-powered construction equipment such as concrete mixers, trucks, bulldozers, and graders for container terminal development; pile drivers and tugboats wharf development; and cargo ships for crane delivery. As part of the Draft EIS/EIR, mitigation was developed aimed at reducing these emissions through accelerating fleet turnover to newer, cleaner equipment, adding retrofit devices and employing best management practices (BMPs). No additional mitigation beyond that identified in the Final EIS/EIR is feasible at this time, however, because of limitations on the availability of required technology in the existing construction fleet. Most construction contractors do not own their own equipment because of the costs associated with owning, maintaining and storing large equipment, but instead rent equipment. The pool of rental construction equipment featuring the most stringent available emissions control technologies is limited, however, and construction contractors cannot be sure of being able to rent that equipment. For example, new Tier 3 standard off-road engines first became commercially available in 2006/2007 for the prevalent horsepower categories proposed for Project construction. Since most of the construction would occur within a few years after this time, and construction equipment rental firms have not yet had time to entirely update their fleets, not all Project construction equipment is expected to comply with the most stringent emissions control standards. Hence, **MM AQ-3** proposes a feasible goal that requires non-marine construction equipment on the average to comply with Tier 2-equivalent standards until 2012. **MM AQ-3** does require all of the

equipment to comply with the Tier 3 standards from 2012 to 2014 and Tier 4 in 2015 and onwards, consistent with the Port's Sustainable Construction Guidelines. The discussion below includes more details on suggested changes to mitigation measures raised in comments on the Draft EIS/EIR.

Public Comment

The Port received numerous comments in several comment letters regarding various mitigation measures put forth under **Impact AQ-1** or otherwise applicable for discussion herein.

Mitigation Measure Comments

The Coalition for a Safe Environment (CFASE) made a general comment (CFASE-3) that all potential mitigation that will become cost effective or feasible within 12 months should be required as mitigation. The Port considers this mitigation as infeasible, as there is no way to determine in advance which new technologies would become cost effective or feasible. In addition, there are many types of feasibility, including technical feasibility, economic feasibility, and commercial feasibility. In order for new technologies to be implementable, they must be technically, economically, and commercially feasible, and there is no way to determine in advance the schedule for when those feasibilities will be met. Because of this, the recommendation is considered infeasible.

MM AQ-1 (Harbor Craft Used during Construction). Regarding this mitigation measure, the comments (USEPA-25, PCAC-6, and RH-3) recommended requiring Tier 4 standards for construction in 2015, requiring the contractor to obtain Tier 4 equipment from as far away as Oregon and Washington, and to limit exceptions to equipment with other controls. The recommendations were declined, as the Port would ensure that construction contractors comply with CAAP measures, Project-specific mitigation, and LAHD Sustainable Construction Guidelines through the environmental compliance plan. While the Port uses restrictions and requirements geared at requiring construction contractors working within its jurisdiction to use the cleanest feasible construction equipment readily available, the Port does not overly burden the contractors by requiring construction equipment not readily available (such as requiring the leasing of out-of-state equipment) as it would pose an undue economic burden on contractors in California, as well as result in additional emissions associated with transportation of such equipment from those states. In addition, the recommendations are declined to ensure the competitiveness of the bidding process. It should be noted that Project construction would be completed by the time Tier 4 standards are applied to harbor craft in 2015. Based on the above, the recommendations are considered to be infeasible.

MM AQ-3 (Fleet Modernization for On-Road Trucks Used During Construction) Regarding this mitigation measure, the comment (USEPA-22) recommended the use of Tier 4 non-road standards or 2010 on-road standards for heavy duty highway engines. The Port is declining this suggestion, as Tier 4 standards should be associated with a Port-wide strategy, such as part of the effort to reduce emissions through implementation of the CAAP, which allows such technologies to be demonstrated, developed, and implemented uniformly and in a more coordinated manner without creating competitive disadvantages between terminals and Ports. Furthermore, there is a high likelihood that construction will be completed prior to 2014 when the phase-in period for Tier 4 non-road standards is closed. To ensure that construction bidding remains competitive, this recommendation is not considered practicable or feasible. The Port also received comments (SCAQMD-10, PCAC-7, and RH-4) requesting that the exception for import haulers and earth movers allowing 2004 on-road emission standards for PM₁₀ and NO_x instead of USEPA 2007 on-road emission standards be removed. This request has been granted and the mitigation measure has been revised to eliminate the exception. Other comments on MM AQ-3 recommended requiring covering of truck loads on and off-port, and to require the use of new construction

equipment within 90 days of their becoming available. Haul trucks are already required to be covered by post standard contract specifications. In addition, the Port will enter into a construction contract with the winning bidder. The contract would include certain mitigation measures, including engine standard requirements for construction equipment. The Port cannot make additional equipment requirements once the contract is awarded, and based on this, the recommendation to require new equipment when they become compliant or available is deemed to be infeasible.

MM AQ-4 (Fleet Modernization for Construction Equipment). Regarding this mitigation measure, the comments (SCAQMD-11, PCAC-8, PCAC-10, RH-5, and RH-7) recommended requiring Tier 4 standards or that other clean standards apply to all construction equipment, without feasibility caveats. The comments also recommended disallowing exceptions to 5-minute idling limit. Although Tier 4 non-road emission standards became available in 2011, there is usually a lag before contractors and equipment rental companies replace their equipment with newer equipment due to lifecycle costs. Mitigation measure MM AQ-4 requires use of Tier 3 equipment retrofitted with CARB-verified Level 3 DECs, at a minimum, which does not preclude their use of equipment meeting Tier 4 non-road emission standards. The use of Tier 4 equipment for construction will be considered at the time of the bidding process. MM AQ-4 limits idling to 5 minutes when not in use, and does not contain caveats, as mentioned in the comment.

MM AQ-7 (General Mitigation Measure). Regarding this mitigation measure, the comments (PCAC-9 and RH-6) recommended requiring the contractor to implement the cleaner equipment (beyond that required by mitigation measures **MM AQ-1 through MM AQ-6**) within 90 days of becoming available. The intent of the measure is to replace **MM AQ-1 through MM AQ-6** with a cleaner standard as it becomes available and as it can perform better. This determination, as stated in MM AQ-7, is dependent on further Port review. The Port is reserving the right to review such a replacement to ensure that it would make sense and be effective. However, the Port cannot make a blanket determination in advance of an equipment-specific review, as recommended by the comments. Further, MM AQ-7 is intended to serve as a back-up to **MM AQ 1 through MM AQ-6**. It is not intended to be a contractor requirement, as recommended in the comment. The Port constructs terminal improvements through a competitive bidding process and establishes construction contracts with the winning bidder. Prospective contractors base their bids on the proposal requirements, and the Port cannot place new requirements on contractors after establishment of the construction contract. Because of this, the recommendations are considered infeasible and the Port is declining this recommendation.

Impact AQ-2: Proposed Project construction would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-17.

Dispersion modeling of on-site Project construction emissions was performed to assess the impact of the proposed Project on local ambient air concentrations. A complete dispersion modeling report is included in Appendix E2 of the Draft EIS/EIR. Table AQ-3 shows that the maximum off-site pollutant concentrations resulting from construction. The maximum off-site 24-hour and annual PM₁₀ concentration increments would exceed SCAQMD significance thresholds. In addition, the maximum off-site 1-hour and state annual NO₂ concentration, including background, would exceed the SCAQMD significance threshold. Therefore, without mitigation, maximum off-site ambient pollutant concentrations associated with the construction of the proposed Project would be significant for PM₁₀ (24-hour and annual average) and NO₂ (1-hour and state annual average).

Since construction would occur while terminal operations are ongoing, Table AQ-4 shows the overlap of construction and operational-related concentrations in 2012. In addition to the impact noted above for construction alone, the overlap of construction and operations would result in a significant impact for 24-hour $PM_{2.5}$ prior to mitigation.

Finding

Implementation of mitigation measures **MM AQ-1 through MM AQ-8** would reduce ambient pollutant impacts from Project construction. Implementation of these measures would substantially lessen emissions from criteria pollutants associated with construction of the proposed Project, as listed in Tables AQ-5 and AQ-6 below. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into the project that avoid or substantially lessen the significant environmental effect identified in the Final EIR. The residual air quality impacts would be temporary but significant during construction for annual and 1-hour NO_2 and annual and 24-hour PM_{10} after mitigation. Concentrations of 24-hour $PM_{2.5}$ would be reduced to a less than significant level after mitigation. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, as explained below.

Rationale for Finding

Changes or alterations in the form of mitigation measures have been incorporated into the project in the form of mitigation measures **MM AQ-1 through MM AQ-8** which substantially lessen significant construction emissions, as shown in Tables AQ-5 and AQ-6. Although reduced as a result of the mitigation measures, construction equipment emission concentrations remain significant and unavoidable during construction.

Table AQ-3: Maximum Off-site Ambient Concentrations –Proposed Project Construction without Mitigation

Pollutant	Averaging Time	Background Concentration (µg/m ³)	Maximum Concentration (without Background) (µg/m ³)	Total Ground- Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)
NO ₂	Federal 1-hour ^a	147	195	342	188
	State 1-hour ^b	235	237	472	338
	Federal annual ^c	40	25	66	100
	State annual ^c	40	25	66	57
CO ^f	1-hour	4,600	348	4,948	23,000
	8-hour	2,878	68	2,946	10,000
PM ₁₀ ^d	24-hour	NA	11.5	NA	10.4
	Annual	NA	4.5	NA	1.0
PM _{2.5} ^d	24-hour	NA	5.5	NA	10.4

Notes:

- a) The high 8th highest modeled 1-hour NO₂ was added to the design value background concentration for comparison with the federal 1-hour standard.
- b) The high 1st highest modeled 1-hour NO₂ was added to the background concentration for comparison with the state 1-hour standard.
- c) The 1st highest modeled annual average NO₂ was added to the background concentration for comparison with the federal and state annual average standard.
- d) The PM₁₀ and PM_{2.5} thresholds are incremental thresholds, therefore the high 1st highest modeled 24-hour and annual PM₁₀ and 24-hour PM_{2.5} were compared to the incremental threshold.
- e) SCAQMD does not list a Significant Impact Level for annual PM_{2.5}, therefore the modeled annual average PM_{2.5} was compared to the Prevention of Significant Deterioration (PSD) Significant Impact Level (SIL) of 0.3 µg/m³ for the determination of NEPA significance only.
- f) The high 1st highest modeled 1-hour and 8-hour CO values were respectively added to the background concentration for comparison with the federal 1-hour and 8-hour standards.
- g) In accordance with SCAQMD guidance offsite haul truck transport emissions are considered offsite emissions and were not included in the modeling (SCAQMD, 2005). However, tugboat emissions associated with barge tending and dredging operations while at the construction site and onsite truck emissions were included in the modeling.

Table AQ-4: Maximum Off-site Ambient Concentrations –Proposed Project Construction and Operations without Mitigation

Pollutant	Averaging Time	Background Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Concentration (without Background) ($\mu\text{g}/\text{m}^3$)	Total Ground-Level Concentration ($\mu\text{g}/\text{m}^3$)	SCAQMD Threshold ($\mu\text{g}/\text{m}^3$)
NO ₂	Federal 1-hour ^a	147	197	343	188
	State 1-hour ^b	235	246	481	338
	Federal annual ^c	40	38	78	100
	State annual ^c	40	38	78	57
CO ^f	1-hour	4,600	590	5,190	23,000
	8-hour	2,878	103	2,981	10,000
PM ₁₀ ^d	24-hour	NA	20.7	NA	10.4
	Annual	NA	6.6	NA	1.0
PM _{2.5} ^d	24-hour	NA	10.9	NA	10.4

Notes:

- a) The high 8th highest modeled 1-hour NO₂ was added to the design value background concentration for comparison with the federal 1-hour standard.
- b) The high 1st highest modeled 1-hour NO₂ was added to the background concentration for comparison with the state 1-hour standard.
- c) The 1st highest modeled annual average NO₂ was added to the background concentration for comparison with the federal and state annual average standard.
- d) The PM₁₀ and PM_{2.5} thresholds are incremental thresholds, therefore the high 1st highest modeled 24-hour and annual PM₁₀ and 24-hour PM_{2.5} were compared to the incremental threshold.
- e) SCAQMD does not list a Significant Impact Level for annual PM_{2.5}, therefore the modeled annual average PM_{2.5} was compared to the PSD SIL of 0.3 $\mu\text{g}/\text{m}^3$ for the determination of NEPA significance only.
- f) The high 1st highest modeled 1-hour and 8-hour CO values were respectively added to the background concentration for comparison with the federal 1-hour and 8-hour standards.
- g) In accordance with SCAQMD guidance offsite haul truck transport emissions are considered offsite emissions and were not included in the modeling (SCAQMD, 2005). However, tugboat emissions associated with barge tending and dredging operations while at the construction site and onsite truck emissions were included in the modeling.

Table AQ-5: Maximum Off-site Ambient Concentrations –Proposed Project Construction with Mitigation

Pollutant	Averaging Time	Background Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Concentration (without Background) ($\mu\text{g}/\text{m}^3$)	Total Ground-Level Concentration ($\mu\text{g}/\text{m}^3$)	SCAQMD Threshold ($\mu\text{g}/\text{m}^3$)
NO ₂	Federal 1-hour ^a	147	120	267	188
	State 1-hour ^b	235	144	380	338
	Federal annual ^c	40	16	56	100
	State annual ^c	40	16	56	57
CO ^f	1-hour	4,600	343	4,943	23,000
	8-hour	2,878	67	2,945	10,000
PM ₁₀ ^d	24-hour	NA	8.8	NA	10.4
	Annual	NA	3.5	NA	1.0
PM _{2.5} ^d	24-hour	NA	3.0	NA	10.4

Notes:

- a) The high 8th highest modeled 1-hour NO₂ was added to the design value background concentration for comparison with the federal 1-hour standard.
- b) The high 1st highest modeled 1-hour NO₂ was added to the background concentration for comparison with the state 1-hour standard.
- c) The 1st highest modeled annual average NO₂ was added to the background concentration for comparison with the federal and state annual average standard.
- d) The PM₁₀ and PM_{2.5} thresholds are incremental thresholds, therefore the high 1st highest modeled 24-hour and annual PM₁₀ and 24-hour PM_{2.5} were compared to the incremental threshold.
- e) SCAQMD does not list a Significant Impact Level for annual PM_{2.5}, therefore the modeled annual average PM_{2.5} was compared to the PSD SIL of 0.3 $\mu\text{g}/\text{m}^3$ for the determination of NEPA significance only.
- f) The high 1st highest modeled 1-hour and 8-hour CO values were respectively added to the background concentration for comparison with the federal 1-hour and 8-hour standards. In accordance with SCAQMD guidance offsite haul truck transport emissions are considered offsite emissions and were not included in the modeling (SCAQMD, 2005). However, tugboat emissions associated with barge tending and dredging operations while at the construction site and onsite truck emissions were included in the modeling

Table AQ-6: Maximum Off-site Ambient Concentrations –Proposed Project Construction and Operations with Mitigation

Pollutant	Averaging Time	Background Concentration (µg/m ³)	Maximum Concentration (without Background) (µg/m ³)	Total Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)
NO ₂	Federal 1-hour ^a	147	197	343	188
	State 1-hour ^b	235	201	436	338
	Federal annual ^c	40	38	78	100
	State annual ^c	40	38	78	57
CO ^f	1-hour	4,600	583	5,183	23,000
	8-hour	2,878	102	2,980	10,000
PM ₁₀ ^d	24-hour	NA	16.5	NA	10.4
	Annual	NA	5.5	NA	1.0
PM _{2.5} ^d	24-hour	NA	7.2	NA	10.4

Notes:

- a) The high 8th highest modeled 1-hour NO₂ was added to the design value background concentration for comparison with the federal 1-hour standard.
- b) The high 1st highest modeled 1-hour NO₂ was added to the background concentration for comparison with the state 1-hour standard.
- c) The 1st highest modeled annual average NO₂ was added to the background concentration for comparison with the federal and state annual average standard.
- d) The PM₁₀ and PM_{2.5} thresholds are incremental thresholds, therefore the high 1st highest modeled 24-hour and annual PM₁₀ and 24-hour PM_{2.5} were compared to the incremental threshold.
- e) SCAQMD does not list a Significant Impact Level for annual PM_{2.5}, therefore the modeled annual average PM_{2.5} was compared to the PSD SIL of 0.3 µg/m³ for the determination of NEPA significance only.
- f) The high 1st highest modeled 1-hour and 8-hour CO values were respectively added to the background concentration for comparison with the federal 1-hour and 8-hour standards.
- g) In accordance with SCAQMD guidance, offsite haul truck transport emissions are considered off-site emissions and were not included in the modeling (SCAQMD, 2005). However, tugboat emissions associated with barge tending and dredging operations while at the construction site and onsite truck emissions were included in the modeling.

Public Comment

Public comments were submitted regarding mitigation measures **MM AQ-1**, **MM AQ-3**, **MM AQ-4**, and **MM AQ-7**, as well as other recommended measures. These measures are discussed under **Impact AQ-1** above. The responses to comments received on these mitigation measures under **Impact AQ-1** above would also pertain to **Impact AQ-2**, and likewise establish that aside from revisions to mitigation measure **MM AQ-3**, recommended mitigation revisions or new mitigation are infeasible. Please see discussion under **Impact AQ-1** above.

Impact AQ-3: The proposed Project would result in operational emissions that exceed 10 tons per year of VOCs or an SCAQMD threshold of significance in Table 3.2-18.

Emissions from Project operations were evaluated in the EIS/EIR for five proposed Project study years: 2012, 2015, 2020, 2025, and 2027. Unmitigated peak daily emissions from operation of the proposed Project would not exceed CEQA baseline emissions for any criteria pollutants in 2012, would exceed the NO_x threshold in 2015, 2025 and 2027, and would exceed the VOC threshold

in 2027. Table AQ-7 below summarizes the peak daily emissions. The 10 tons per year VOC threshold would not be exceeded in any study year (see Appendix E1 of the Draft EIS/EIR). Therefore, under CEQA, the unmitigated air quality impacts associated with proposed Project operations would be significant for NO_x in 2015, 2025 and 2027 and VOC in 2027.

The main contributors to Project operational emissions include: (1) container ships and associated tugs; (2) trucks and rail trips; and, (3) backland terminal equipment. Vessel sources produce the greatest percentage of total Project emissions and are largely not subject to regional agency-adopted requirements to meet lower emissions standards.

Finding

Mitigation measures **MM AQ-9 through MM AQ-16**, and lease measures **LM AQ-1 and LM AQ-2** have been developed to reduce operational emissions. Implementation of these measures would substantially lessen emissions from criteria pollutants associated with operation of the proposed Project, as shown in Table AQ-8, below. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect identified in the EIS/EIR.

Proposed Project peak daily emissions after mitigation would not exceed CEQA baseline emissions for CO, NO_x, SO_x, PM₁₀ or PM_{2.5} in any of the five proposed Project study years. Proposed Project peak daily emissions would exceed the VOC peak daily threshold in 2025 and 2027. Therefore, the mitigated air quality impacts associated with proposed Project operations would be less than significant for NO_x, CO, SO_x, PM₁₀, and PM_{2.5} in all study years. Mitigated air quality impacts associated with proposed Project operations would remain significant and unavoidable for VOC emissions in 2025 and 2027.

Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, however, as explained below.

Table AQ-7: Peak Daily^a Operational Emissions Without Mitigation – Proposed Project

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Project Year 2012						
Total – Project Year 2012^b	620	2,016	10,515	231	354	214
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	(304)	(1,523)	(2,611)	(5,163)	(761)	(648)
Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Project Year 2015						
Total – Project Year 2015^b	965	3,026	14,976	301	496	297
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	40	(513)	1,850	(5,093)	(619)	(565)

Table AQ-7: Peak Daily^a Operational Emissions Without Mitigation – Proposed Project

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Thresholds	55	550	55	150	150	55
Significant?	No	No	Yes	No	No	No
Project Year 2020						
Total – Project Year 2020^b	955	3,115	13,011	273	454	248
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	30	(424)	(115)	(5,121)	(662)	(615)
Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Project Year 2025						
Total – Project Year 2025^c	978	3,107	13,575	319	495	269
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	54	(432)	449	(5,075)	(621)	(593)
Thresholds	55	550	55	150	150	55
Significant?	No	No	Yes	No	No	No
Project Year 2027						
Total – Project Year 2027^b	987	3,170	13,594	319	502	271
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	62	(369)	469	(5,075)	(614)	(592)
Thresholds	55	550	55	150	150	55
Significant?	Yes	No	Yes	No	No	No

Notes:

- a) Emissions assume the simultaneous occurrence of maximum theoretical daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations.
 - b) Emissions might not precisely add due to rounding. For further explanation, refer to the discussion in Section 3.2.4.1 of the Draft EIS/EIR.
- The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Future studies might use updated data, assumptions, and emission factors that are not currently available.

Table AQ-8: Peak Daily^a Operational Emissions With Mitigation – Proposed Project

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Project Year 2012						
Total – Project Year 2012^b	620	2,016	10,515	231	354	214
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	(304)	(1,523)	(2,611)	(5,163)	(761)	(648)
Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Project Year 2015						
Total – Project Year 2015^b	962	3,002	12,779	264	452	258
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	37	(537)	(347)	(5,130)	(663)	(604)
Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Project Year 2020						
Total – Project Year 2020^b	972	3,109	11,513	227	436	233
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	47	(430)	(1,613)	(5,167)	(680)	(629)
Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Project Year 2025						
Total – Project Year 2025^b	998	3,081	11,637	251	469	248
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	74	(458)	(1,489)	(5,143)	(646)	(614)
Thresholds	55	550	55	150	150	55
Significant?	Yes	No	No	No	No	No
Project Year 2027						
Total – Project Year 2027^b	988	3,088	11,345	247	471	246
CEQA Baseline Emissions	924	3,539	13,126	5,394	1,115	863
Project minus CEQA Baseline	64	(451)	(1,781)	(5,147)	(645)	(617)
Thresholds	55	550	55	150	150	55
Significant?	Yes	No	No	No	No	No

Table AQ-8: Peak Daily^a Operational Emissions With Mitigation – Proposed Project

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}

Notes:

- a) Emissions assume the simultaneous occurrence of maximum theoretical daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations.
- b) Emissions might not precisely add due to rounding. For further explanation, refer to the discussion in Section 3.2.4.1 of the Draft EIS/EIR.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Future studies might use updated data, assumptions, and emission factors that are not currently available.

MM AQ-9: Alternative Maritime Power (AMP). APL ships calling at Berths 302-306 must use AMP at the following percentages while hoteling in the Port:

- 2017: 70 percent of total ship calls
- 2026: 95 percent of total ship calls

While the terminal is expected to meet 95 percent AMP, certain events such as equipment failure may mean less than 95 percent of ships would comply with this measure in certain years (the Port expects compliance to be 92 to 93 percent in such cases). A compliance change of 2 to 3 percent would not affect significance findings in this analysis.

Use of AMP would enable ships to turn off their auxiliary engines during hoteling, leaving the boiler as the only source of direct emissions. An increase in regional power plant emissions associated with AMP electricity generation is also assumed. Including the emissions from ship boilers and regional power plants, a ship hoteling with AMP reduces its criteria pollutant emissions 71 to 93 percent, depending on the pollutant, compared to a ship hoteling without AMP and burning residual fuel in the boilers.

MM AQ-10: Vessel Speed Reduction Program. All ships calling at Berths 302-306 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule:

- 2014 and thereafter: 95 percent

Currently, the VSR program is a voluntary program. This mitigation measure requires APL to participate in the VSR program at higher rates than it currently is achieving. The average cruise speed for a container vessel ranges from about 18 to 25 knots, depending on the size of a ship (larger ships generally cruise at higher speeds). For a ship with a 24-knot cruise speed, for example, a reduction in speed to 12 knots reduces the main engine load factor from 83 percent to 10 percent, due to the cubic relationship of load factor to speed. The corresponding reduction in overall container ship transit emissions (main engine, auxiliary engines, and boiler), from the SCAQMD overwater boundary to the berth, is approximately 19 percent for VOC, 37 percent for CO, 56 percent for NO_x, 58 percent for SO_x, and 53 percent for PM₁₀.

MM AQ-11: Cleaner OGV Engines. The Tenant shall seek to maximize the number of vessels calling at the Berths 302-306 terminal that meet the IMO NO_x limit of 3.4 g/kW-hr. The IMO Tier 2 NO_x standards came into effect January 1, 2011 for new vessels. IMO Tier 3 NO_x standards will become effective January 1, 2016 for new vessels operating in Emission Control Areas. When ordering new ships bound for the Port of Los

Angeles, the purchaser shall confer with the ship designer and engine manufacturer to determine the feasibility of incorporating all emission reduction technology and/or design options.

On an individual OGV basis, a 15 percent reduction in NO_x emissions will result from compliance with the IMO Tier 2 standard compared to Tier 1 standard and an 80 percent reduction in NO_x emissions will result from compliance with the IMO Tier 3 standard compared to Tier 1 standard. However for the purposes of this analysis the benefits of this measure are not quantified.

MM AQ-12: OGV Engine Emissions Reduction Technology Improvements. *When using or retrofitting existing ships bound for the Port of Los Angeles, the Tenant shall determine the feasibility of incorporating all emission reduction technology and/or design options. Such technology shall be designed to reduce criteria pollutant emissions (NO_x and DPM). Some examples of potential methods for reducing emissions from large marine diesel engines include:*

- *Direct Water Injection*
- *Fuel Water Emulsion*
- *Humid Air Motor*
- *Exhaust Gas Recirculation*
- *Selective Catalytic Reduction*
- *Continuous Water Injection*
- *Slide Valves*

This measure focuses on reducing DPM and NO_x emissions from the existing fleet of vessels. This measure is coupled with the Port's Technology Advancement Program (TAP) which will evaluate potential technologies. The Tenant will work with the Port in their effort to streamline the evaluation process of emissions reduction technologies under the TAP program and the verification process through CARB in order to achieve the greatest level of emissions reduction from ocean going vessels as quickly as possible.

Because the effectiveness of this measure has not been established, this measure is not quantified in this study.

MM AQ-13: Yard Tractors at Berths 302-306 Terminal. *By the end of 2013, all yard tractors operated at the terminal shall meet USEPA Tier 4 non-road or 2007 on-road emission standards.*

In 2013, this measure would require the all yard tractors to meet the equivalent of the Tier 4 diesel engine standards. This study assumes that this requirement would be met by replacing the yard tractor engines or adding diesel emission controls to meet the equivalent of the Tier 4 diesel engine standards.

MM AQ-14: Yard Equipment at Berths 302-306 Railyard. *All diesel-powered equipment operated at the Berths 302-306 terminal railyard shall implement the requirements discussed below in MM AQ-15.*

MM AQ-15: Yard Equipment at Berths 302-306 Terminal.

- *By the end of 2012: all terminal equipment equipped with Tier 1 and 2 engines less than 750hp must meet 2010 on-road or Tier 4 standards by 2012.*

- *By the end of 2012, the highest available Verified Diesel Emissions Controls (VDECs) shall be installed on all Tier 3 equipment.*
- *By the end of 2015: all terminal equipment equipped with Tier 3 engines shall meet USEPA Tier 4 non-road engine standards.*

For other types of terminal equipment, this measure would provide a health risk benefit if some of the equipment purchased in accordance with this measure were alternative fueled. However, this study conservatively assumed that all equipment purchased in accordance with this measure would be diesel fueled. For diesel-fueled equipment, this measure would provide a short-term reduction in criteria pollutant emissions (roughly until 2015, although it varies by equipment type) compared to unmitigated emissions. Eventually, however, the CARB Regulation for Mobile Cargo-Handling Equipment (CHE) at Ports and Intermodal Railyards (discussed in Section 3.2.3.2 of the Draft EIS/EIR) would cause the unmitigated fleet to “catch up” to the mitigated fleet, at which point there would be no substantial difference in emissions.

MM AQ-16: Truck Idling Reduction Measure. *Within six months of the effective date and thereafter for the remaining term of the Permit and any holdover, the terminal operator shall ensure that truck idling is reduced to less than 30 minutes in total or 10 minutes at any given time while on the terminal through measures that include but are not limited to, the following:*

- *The operator shall maximize the durations when the main gates are left open, including during off-peak hours (6pm to 7am)*
- *The operator shall implement an appointment-based system for receiving and delivering containers to minimize truck queuing (trucks lining up to enter and exit the terminal’s gate)*
- *The operator shall design the main entrance and exit gates to exceed the average hourly volume of trucks that enter and exit the gates (truck flow capacity) to ensure queuing is minimized.*

This measure could potentially reduce on-terminal truck idling emissions. Because the project design includes an improved entrance, the impact on truck idling time at the gate is included in both the unmitigated and mitigated scenarios.

LM AQ-1: Periodic Review of New Technology and Regulations. *The Port shall require the Berths 302-306 tenant to review, in terms of feasibility and benefits, any Port-identified or other new emissions-reduction technology, and report to the Port. Such technology feasibility reviews shall take place at the time of the Port’s consideration of any lease amendment or facility modification for the proposed Project site. If the technology is determined by the Port to be feasible in terms of cost, technical and operational feasibility, the tenant shall work with the Port to implement such technology.*

Potential technologies that may further reduce emission and/or result in cost-savings benefits for the tenant may be identified through future work on the CAAP, Technology Advancement Program, Zero Emissions Technology Program, and terminal automation. Over the course of the lease, the tenant and the Port shall work together to identify potential new technologies. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility, and emissions reduction benefits.

As partial consideration for the Port agreement to issue the permit to the tenant, the tenant shall implement not less frequently than once every 5 years following the effective date of the permit, new air quality technological advancements, subject to mutual

agreement on operational feasibility and cost sharing, which shall not be unreasonably withheld.

The effectiveness of this measure depends on the advancement of new technologies and the outcome of future feasibility or pilot studies. As discussed in the Draft EIS/EIR under Section 3.2.4.1 of Section 3.2 of the Draft EIS/EIR, Air Quality, Meteorology, and Greenhouse Gases, if the tenant requests future Project changes that would require environmental clearance and a lease amendment, future CAAP mitigation measures would be incorporated into the new lease at that time.

LM AQ-2: Substitution of New Technology. *If any kind of technology becomes available and is shown to be as good or as better in terms of emissions reduction performance than the existing measure, the technology could replace the existing measure pending approval by the Port of Los Angeles. The technology's emissions reductions must be verifiable through USEPA, CARB, or other reputable certification and/or demonstration studies to the Port's satisfaction.*

Public Comment

The Port received several comments regarding various mitigation measures required under **Impact AQ-3**, or recommended alternatives to lessen air quality impacts.

Mitigation and Lease Measure Comments

MM AQ-9 (Alternative Maritime Power - AMP). Regarding this mitigation measure, the comments (PCAC-11, RH-1 and RH-9) recommend increasing the percentage of vessels that utilize AMP and phasing in the use of AMP more rapidly. MM AQ-9 was designed to increase use of shoreside power given CAAP requirements and the phase in schedule required by CARB. APL has retrofitted five vessels for cold ironing (i.e., AMP) almost three years in advance of regulations requiring this. The retrofit of five APL vessels, and improvements to the terminal to accommodate the vessels, represented a \$13.1 million capital investment. The five APL cold iron capable vessels, which had 41 cold iron events in Oakland in 2011, also call the Port of Los Angeles. By plugging APL's ships in at Oakland three years prior to regulations, APL will have eliminated nearly 3,600 pound of VOC's, 70,000 pounds of CO, 140,000 pounds of NO_x, 4,000 pounds of PM, and 425,000 pounds of SO_x. Considering the worldwide APL fleet and vessels anticipated under the proposed Project, the recommendations are not considered feasible.

MM AQ-11 (Cleaner OGV Engines). Regarding this mitigation measure, the comments (SCAQMD-12, USEPA-4, USEPA-9, and USEPA-10) recommend requiring the routing of IMO-compliant Tier 3 vessels to the APL Terminal and requiring a specific percentage to meet the new standard.

With the exception of 10 new build vessels that APL will introduce into its Transpacific service that will call Los Angeles, the newest ships purchased by APL are the very largest ships in APL's fleets. These large ships are designated for the Asia-Europe routes. Ships on the Asia-Europe routes travel to multiple destinations before returning to their starting port. This is an effective use of a large ship. It is feasible to fill each ship to capacity when it stops at multiple destinations. Further, the increased size of the ship does not extend the time at each port, because the ship is not fully unloaded or loaded at each individual port. On the Asia-Europe routes, the time in port is approximately 24 hours.

The Transpacific route operates quite differently from the Asia-Europe routes. On the Transpacific route, a ship often stops only one time on the west coast of the United States, and then returns to its beginning destination. This makes it more difficult to fill the largest ships to

capacity, while maintaining a schedule that enables weekly deliveries. More important, if the largest ships were filled to capacity, they would need to be in port for more time than the smaller ships, which would make it impossible to operate a weekly service due to the combined time in port and time in transit.

A liner's deployment of particular container vessels is driven by market demand, rates, and fuel prices. Requiring deployment of the newest ships to the Port of Los Angeles would not be cost-effective, and would place APL at a severe competitive disadvantage. As a result, the recommendations regarding **MM AQ-11** are considered infeasible.

MM AQ-12 (OGV Engine Emissions Reduction Technology Improvements). Regarding this mitigation measure, the comments (SCAQMD-13, PCAC-12, and RH-10) recommend revising MM AQ-12 to include a detailed implementation schedule for retrofitting existing vessels. MM AQ-12 is coupled with the Technology Advancement Program, where new emission reducing technologies are tested for feasibility. APL is currently testing a state-of-the-art seawater scrubber aboard the APL England. This \$3.6 million project was funded in part by a \$1.65 million grant from the Technology Advancement Program. The scrubber features an advanced emission control technology in which seawater is used to scrub, or filter, contaminants from a ship's auxiliary engines and boiler before exiting the exhaust stack of a ship. Once solid carbon contaminants are removed, the seawater used during the scrubbing process is then treated and cleansed before being discharged. A hydro cyclone removes carbons and any liquids that are not water soluble and returns the seawater to a clean, discharge safe state. This water is then pumped overboard and the solids removed by the hydro cyclone are stored in a plastic container and are offloaded ashore for proper disposal. If it proves to be effective, the scrubber could result in air emission reductions of approximately 80 – 85 percent PM, 99.9 percent SO_x, more than a 90 percent decrease in VOCs and 10 percent NO_x from the auxiliary engines and boiler. Although APL is participating in and evaluating emission reducing demonstration projects as part of the TAP, the technologies are still under evaluation. Because feasibility cannot be determined in advance, requiring a specific schedule for feasibility determination would be meaningless. Under a worst case condition, an arbitrary schedule for feasibility could drive a determination of feasibility prior to that technology being truly feasible. For these reasons the recommendation to establish a feasibility schedule for new technology development in MM AQ-12 is deemed to be infeasible.

MM AQ-13 (Yard Tractors at Berths 302-306 Terminal), MM AQ-14 (Yard Equipment at Berths 302-306 Railyard), and MM AQ-15 (Yard Equipment at Berths 302-306 Terminal). Regarding these mitigation measures, the comments (USEPA-22 and SCAQMD-14) recommend requiring Tier 4 non-road standards or 2010 on-road standards for heavy duty highway diesel engines and/or requiring zero emission yard equipment.

Rail Mounted Gantry (RMG) cranes run on rails, which are in a fixed position within the terminal. The acreage that an RMG covers is dedicated to the RMG and not easily converted to alternate methods of container storage, such as storage on chassis. Rubber Tire Gantry (RTG) cranes are more versatile since they can gantry from one stacking row to another and can move aside to free up acreage for alternate methods of container storage solutions market conditions fluctuate. In addition, the infrastructure for RTGs is much less expensive since RTGs do not require an external power source such as an electrical grid and rails for RMGs.

At the on-dock railyard at Pier 300, the tracks are in a fixed position, making it feasible to run rails parallel to the tracks for the electric RMGs. By contrast, on the container yard, the configuration is not fixed, making RMGs impractical. For this reason, the operational flexibility of being able to switch operations between wheeled chassis and RTGs throughout the container

yard was part of the original design criteria for the terminal. Based on the above, switching to fully electric yard RMGs is not feasible at the APL Terminal.

In addition, EMS already has replaced 125 yard tractors at Pier 300 in order to comply with CARB rules. EMS plans to replace 16 top-handlers/ side-handlers and 70 additional tractors in the next two years, pursuant to CARB regulations and the proposed mitigation measure identified in the Draft EIR.

Requiring that yard equipment be replaced with zero emission equipment for the APL Terminal only (within the context of the Port setting that does not require this of other container terminals presents an economic disadvantage to APL. Electric cargo handling equipment runtime of 8 hours does not permit the use of one tractor for two connecting shifts. The 4 to 5 hour battery charge time would necessitate purchase of additional yard tractors to maintain the same cargo velocity or operation at a reduced velocity, which would result in a competitive disadvantage compared to other terminals that can stevedore vessels faster, maintain on-time trains schedules, and timely availability of local cargo.

Because all of the cargo equipment on the terminal, including yard tractors is undergoing replacement with cleaner equipment meeting state law requirements, all of the equipment has a remaining useful life. As a result, if zero emission equipment were to be required in the near-term, the cost to EMS would equal the entire cost of the zero-emission equipment, not the differential cost between zero emission equipment and diesel equipment. Purchase of additional yard tractors to use while tractors are recharging would add even more cost. Based on this, the recommended measures are considered infeasible.

MM AQ-16 (Truck Idling Reduction Measure). Regarding this mitigation measure, the comment (USEPA-18) recommends limiting idling of trucks to 5 minutes. The proposed mitigation in the Draft EIS/EIR regarding truck idling during operation (MM AQ-16) is appropriate for the safe and efficient operation of the container terminal. In addition to the mitigation measure, the APL Terminal operator already limits idling from trucks calling at the terminal. Policies such as requiring all on-road trucks being processed at the main gate to shut down their engines before they will be processed and use of control devices on yard equipment that automatically shuts down the engine after being in park and idling for 15 minutes (which would indicate equipment is not in use) are measures that limit unnecessary idling while maintaining safety and efficiency within the terminal.

LM AQ-1 (Periodic Review of New Technology and Regulations). Regarding this lease measure, the comment (USEPA-26, PCAC-13, CFASE-13, RH-12) recommends a 5-year lease reopener for new technologies rather than a 7-year reopener, and/or recommend requiring a specific phase in schedule for new technologies. Regarding the lease reopener, the Port has revised LM AQ-1 to reflect a 5-year reopener, as request. However, the Port's approach regarding new technologies is to facilitate the demonstrations, development and implementation of new emission-reduction technologies using a Port-wide strategy rather than on a terminal-by-terminal basis. A Port-wide approach allows such technologies to be demonstrated, developed, and implemented uniformly without creating competitive disadvantages between terminals and Ports, as well as in a more coordinated manner. Because new technologies are not yet commercially available and because a Port-wide approach to implementation is required, the recommendation is not considered feasible.

LM AQ-2 (Substitution of New Technology). Regarding this lease measure, the comment (PCAC-14, CFASE-13, and RH-13) recommends require specific phase in schedules for new emission reducing technologies. As described above under **LM AQ-1**, a Port-wide approach is being used that allows emission reducing technologies to be demonstrated, developed, and

implemented uniformly without creating competitive disadvantages between terminals and Ports, as well as in a more coordinated manner. Because new technologies are not yet commercially available and because a Port-wide approach to implementation is required, the recommendation is not considered feasible.

New Lease Measure – Phase in of Zero Emission Drayage Trucks. Comments (USEPA-17 and SCAQMD-8) were also received that requested a new lease measure to require a specific phase in of drayage truck improvements (zero emission drayage trucks) be required. This issue is the same as that raised in their request to include an implementation schedule for new technologies in **LM AQ-1** and **LM AQ-2**, and for the same reasons as explained above, the recommendation is not considered feasible. In addition, the Port considered in the EIS/EIR (under **Impact AQ-7**) additional mitigation regarding drayage trucks but determined that it would be infeasible at this time. Drayage trucks operating at Port terminals are subject to the Clean Truck Program (CTP) implemented in 2008 by the Ports of Los Angeles and Long Beach. Starting January 1, 2012, all drayage trucks operating at Port terminals must meet USEPA 2007 heavy duty truck emissions standards. In the period since the start of the CTP in 2008, more than 10,000 older drayage trucks have been replaced with USEPA 2007 emissions compliant trucks at a cost to the State of California and the two ports of more than \$200 million and at a cost to private industry of more than \$800 million. The result has been overall drayage truck emissions reductions of at least 80 percent in cancer causing DPM, and more than a 90 percent reduction in DPM when compared to the oldest drayage trucks that were operating at Port terminals. Analysis of health risk exposure for the proposed Project assumes full compliance with CTP requirements, so the trucks serving the APL Terminal affecting residential cancer risk that are operating on the Terminal Island Freeway are fully compliant with 2007 emission standards. As a result, to further reduce residential cancer risk caused by operation of these trucks, APL would have to require that only trucks with lower DPM emissions than 2007-compliant trucks could operate at its terminal. In light of the more than \$1 billion investment in clean drayage trucks made by the State, the Port, and private industry in the last three years, to require that the drayage industry start replacing these trucks again right away prior to cost recovery is not considered feasible. However, though no formal requirements have been approved at this time, it is expected that additional controls on drayage truck DPM emissions will be required by the State and the Port in the coming years, thereby further reducing DPM emissions and associated residential cancer risk over the 70 year exposure period. No other feasible mitigation of DPM emissions from drayage trucks is available at this time.

New Mitigation Measure – Tier 4 Standards for Line Haul Locomotives. The SCAQMD (comment SCAQMD-15) recommended accelerating Tier 4 line haul locomotives at the On-dock railyard. The USEPA has jurisdiction on the implementation schedule for Tier 4 locomotives. Tier 4 locomotive engines aren't required by USEPA to be manufactured until 2015, this will require that the rail companies make a significant investment in Tier 4 locomotives after 2015 and dedicate the majority of those purchases to port service. According to the 2010 CAAP Update, the cost to purchase a dedicated port locomotive fleet is significant, at approximately \$3 million per locomotive (50 percent higher than the cost of Tier 2 locomotives) or \$2.25 billion. A portion of these locomotive upgrades are likely to occur as part of the normal fleet turnover, however additional costs are anticipated above normal turnover for the rail companies to provide a port fleet and still meet the equipment needs for other regions. Commercial availability of Tier 4 locomotive engines and technology status evaluations by the USEPA and/or CARB are essential to ensure integration into operations. Because of this and the significant capital investment, the recommendation to implement Tier 4 standards to line haul locomotives at the on-dock railyard is considered infeasible.

New Mitigation Measure – Advanced Maritime Emissions Control Systems (AMECS). The Coalition for a Safe Environment (comment CFASE-17) recommends requiring AMECS for non-AMP ships. AMEC is essentially a baghouse installed over a ship’s stack while it is docked. These units collect pollutants, which subsequently must be disposed of in solid or liquid form. The system continues to be tested with generally promising results. However, it is not considered feasible at this time. Currently there are no verified, commercially-available emissions reductions technologies for direct use on ship auxiliary emissions other than shore power. However, the Technology Advancement Program has successfully demonstrated AMECS in short-term testing on two bulk vessels. The testing of the system has confirmed that emission reductions equivalent to those of shore power could potentially be achieved through the use of this alternative technology. In the meantime, the Port and its tenants have been installing AMP (shore power that allows ships to turn off main engines and auxiliary engines while docked) since 2004, and will meet CARB’s requirement to reduce 80 percent of these engine emissions by 2020. With mitigation, APL is expected to achieve reductions of 95 percent by 2026.

New Mitigation Measure – Best Available Control Technologies (BACT). Richard Havenick (comment RH-8 and RH-11) recommends BACT for yard and other equipment. The Draft EIS/EIR analysis assumes compliance with the CAAP. In fact, proposed Project-specific mitigation measures applied to reduce air emissions and public health impacts are consistent with, and in some cases exceed, the emission-reduction strategies of the CAAP. The Draft EIS/EIR also includes lease measures prescribed for the proposed Project that provides a means for additional measures to be incorporated into the applicant’s/tenant’s lease should the CAAP be strengthened or new technology be feasible in the future. In addition, the LAHD’s Sustainable Construction Guidelines are another way the Port is implementing programs to reduce emissions from construction activity. Because there Port has a lease mechanism that allows for cleaner equipment to be phased in, the recommendation is considered duplicative of existing measures.

New Mitigation Measures – Various. The Coalition for a Safe Environment (comment CFASE-10 and CFASE-17) recommends requiring various other mitigation measures including the following:

- Require terminals to use the Alameda Corridor,
- Extend On-dock rail to dockside,
- Requiring more frequent inspections of A/C units to reduce HFCs,
- Install air purification systems at residences, schools, and day cares.

Regarding requiring terminal to use the Alameda Corridor, this recommendation is considered redundant to existing conditions, as containers that are shipped via train from the APL Terminal utilize the Alameda Corridor. In addition, it is not economically/practically feasible for the Port to require greater use of rail than the market will support. Extending the on-dock rail lines to the wharf is considered infeasible, as the required infrastructure would require dedicated corridor through backlands that would decrease backland efficiencies, and would interfere with the container loading and unloading process at the wharf. Because of this, this recommendation is considered infeasible.

Regarding increasing the frequency of A/C unit inspections, APL already routinely inspects and maintains their refrigeration units for efficiency and to minimize costs of having to replace refrigerants. Additional inspections are not expected to substantially reduce HFCs.

Regarding installing air purifications at residences, schools, and daycares that are located adjacent to transportation corridors, the proposed Project would not result in significant impacts to

sensitive receptors adjacent to transportation corridors, so there is no nexus to the recommended mitigation. However, as detailed in the TraPac MOU, approximately \$6 million has been allocated by LAHD for air filtration systems in schools, and if the proposed Project were approved, additional deposits to this Fund would be made. Project impacts to residential receptors are only limited to live-aboard receptors at nearby marinas which do not occupy traditional residential structures and instead live on boats. Because of this, the recommendation is not applicable given that there are no residential structures and there is no nexus to the recommended mitigation.

Comments on New Components or Alternatives

New Project Component - Roof over Refrigerated Containers. A comment (USEPA-24) was received that recommended a roof over area where refrigerated containers would be stored, and to place solar panels on the roof to generate alternative power. This recommendation is considered infeasible because it would prevent access to the containers, which occurs from above using top-picks. Additionally, even if such a roof could be high enough to accommodate yard equipment, the roof structure would necessitate new lighting beneath the structure for use during nighttime, as the roof would block lighting from fixtures throughout the backlands.

New Project Component – Require Automated Container Stacking. A comment (USEPA-12) was received that recommended requiring automated container handling at Berth 306 to reduce terminal emissions. Implementation of an automated stacking system represents a capital improvement for the terminal operator, the decision of which is dependent on whether the economics of such a system make sense, given market conditions. The automated stacking system is a potential Project component that is included in the Draft EIS/EIR because it could be implemented in the future. Because the automated stacking system represents a project component and not a lease or mitigation measure, it is carried in the Draft EIS/EIR as an option, not a requirement of lease measure **LM AQ-2**. Because the automated stacking system is a project component that may be implemented if it is feasible from an economic standpoint, making it a requirement is considered infeasible.

New Component for Alternative 6– Maximize On-dock Rail. The SCAQMD (SCAQMD-2 and SCAQMD-9) recommended maximizing on-dock rail capacity consistent with the 2006 San Pedro Bay Ports Rail Study to reduce the number of drayage trucks to near dock yards. The 2006 San Pedro Bay Ports Rail Study was based on 2005 cargo forecasts. Since that time, the US and world economies have experienced a severe recession, that has dramatically impacted international trade, and volumes at the Ports (throughput is significantly below 2006 peak volumes). As a result, the Ports reexamined the forecasted cargo projections based on new economic conditions. The 2009 forecast update (Tioga, 2009), predicts continuing declines in cargo volume through 2009, with 2010 marking the end of the recession and a return to positive cargo growth rates. Essentially, the update predicts that it will take the Ports six to seven years to return to the peak volumes of 2006, and the Ports will continue to grow at a slower pace than predicted in the preceding cargo forecast in 2007.

The throughput projection and the on-dock rail capacities included in Alternative 6 (proposed Project with expanded on-dock rail) are based on the most recent cargo forecasts updates and terminal-specific historic and projected on-dock utilization.

Through 2008, the historic mode split at the EMS Pier 300 Terminal for on-dock rail has ranged from approximately 16 percent to approximately 38 percent of all vessel lifts. The relatively large increase in the on-dock rail mode split in 2008 was accompanied by a sharp decrease in overall cargo throughput. EMS expects the on-dock rail mode split to return to 35 percent over time, as explained in more detail, below.

On-Dock Rail	2001	2002	2003	2004	2005	2006	2007	2008
Percent of Vessel Lifts	22%	20%	16%	17%	22%	27%	30%	38%

Chapter 1 of the Draft EIS/EIR explains that not all rail-bound cargo can be handled at an on-dock railyard. On-dock rail generally is used when there are enough containers to build a train that will travel to a particular destination. When there are too few containers to build a train to a particular destination, those containers must either be trucked to a near dock railyard, or trucked to an off-dock railyard, so that the containers can be combined with containers from other terminals to build a whole train that will travel to that destination.

The Port determined that, absent a capacity constraint at the railyard, the mode split for on-dock rail at Pier 300 is likely to remain at 35 percent for the duration of the lease period. EMS agrees with this assumption. Even though there presently is plenty of additional capacity at the Pier 300 on-dock railyard, not all rail cargo is handled at the on-dock railyard because of market conditions that necessitate sending a portion of the containers to other railyards so that they can be combined into whole trains for delivery to their destinations in a timely manner. Many other factors outside the control of the terminal operator also determine on-dock rail volumes, including the container liner's book of business, line-haul rail rates and designated hubs, and track access to and from Terminal Island. The proposed Project or Alternative 6 does not affect the market factors that drive these rail mode splits.

It is unknown how or whether market conditions will change in the future. For example, the expansion of the Panama Canal could increase the percentage of cargo delivered to the eastern portion of the United States via ocean-going vessels, which could result in a corresponding decrease in the percentage of cargo that travels by rail to and from west coast ports. As another example, in the three most recent years (2009, 2010 and 2011), EMS experienced a short-term increase in export cargo handled at the Pier 300 on-dock railyard. The percentage of imports arriving by ship and then sent eastbound from the on-dock railyard has stayed at a steady 20 percent of overall vessel lifts over the last four years. By contrast, export volumes, containers traveling to the on-dock railyard by westbound train, averaged 14 percent of overall vessel lifts until 2008, and then grew rapidly, reaching a high of 25.8 percent in 2011. EMS predicts that, over time, imports will stay at approximately the 20 percent level and exports will taper back down to 15 percent of overall lifts, based on the historic patterns that EMS has observed as overall vessel volumes have increased at the terminal. However, even if this recent increase in export volumes were to continue, it would not necessarily indicate a lack of capacity at the on-dock railyard. A more balanced split between exports and imports, even if it were to result in an overall on dock rail mode split above 35 percent, could be accommodated without the need for more rail capacity. Trains that come in loaded with exports can be unloaded and then the same trains can be loaded with import cargo and sent back out.

The 2006 San Pedro Bay Ports Rail Study was based on 2005 cargo forecasts. Since that time, the US and world economies have experienced a severe recession, that has dramatically impacted international trade, and volumes at the Ports (throughput is significantly below 2006 peak volumes). As a result, the Ports reexamined the forecasted cargo projections based on new economic conditions. The 2009 forecast update (Tioga, 2009), predicts continuing declines in cargo volume through 2009, with 2010 marking the end of the recession and a return to positive cargo growth rates. Essentially, the update predicts that it will take the Ports six to seven years to

return to the peak volumes of 2006, and the Ports will continue to grow at a slower pace than predicted in the preceding cargo forecast in 2007. In addition to market factors, there are independent, physical constraints that limit use of the on-dock railyard at Pier 300. As explained in the San Pedro Bay Ports Rail Study Update (Dec. 2006), the mainline from CP W. Thenard to across Badger Bridge, and the configuration of main track crossovers and leads to CP Mole, act as a constraint to expanded use of on-dock rail facilities on Terminal Island. Even with all improvements shown in the Rail Enhancement Program list, the addition of another major rail facility would result in unacceptable levels of service by 2030.

Based on historic mode split data, market conditions that drive mode split, and offsite constraints, the Port's assumption that the on-dock rail mode split will remain at approximately 35 for the duration of the least term appears to be reasonable. In addition, the recommendation to expand the on-dock railyard to the level called for in 2006 San Pedro Bay Ports Rail Study Update is not warranted at this time. However, if market demand for on dock rail facilities were to increase such that additional capacity is needed, the proposed Project or Alternative 6 would not preclude the future addition of tracks parallel to the existing tracks at the on-dock railyard to accommodate the increased demand.

New Alternative – Modified Automated Terminal. Several comments were received (USEPA-13, and CFASE-6, CFASE-7, CFASE-9, and CFASE-10) recommending that on-dock yard be expanded and/or backlands automated to eliminate the need to dray containers to near dock yards and reduce emissions associated with container drayage. This alternative is considered infeasible because, as explained in the EIR, not all rail-bound cargo can be handled at an on-dock railyard. On-dock rail generally is used when there are enough containers to build a train that will travel to a particular destination. When there are too few containers to build a train to a particular destination, those containers must either be trucked to a near dock railyard, or trucked to an off-dock railyard, so that the containers can be combined with containers from other terminals to build a whole train that will travel to that destination. In addition, a fully automated terminal is not an economically feasible option for the APL Terminal. Although automated operations at the backlands behind Berth 306 is discussed as a possible project component, it is not currently obvious that such automation on a limited acreage (41 acres behind Berth 205) is economically feasible, let alone the 341-acre terminal site. Therefore, a fully automated terminal is not considered feasible at this time. The comments also recommended reconfiguring the dock in a “U” shape to facilitate loading and unloading from both sides of the ship. Because the proposed Project is an expansion of the existing terminal on existing but undeveloped fill, and the wharf and backlands are not currently configured to support a “U” type of terminal operation, this recommendation is considered to be infeasible.

New Alternative – Zero Emission Container Transport System. Several comments (USEPA-17, USEPA-19, SCAQMD-3, SCAQMD-4, SCAQMD-22, CFASE-4, CFASE-6, CFASE-7, CFASE-8, and CFASE-10) were received requesting that a Zero Emission Container Transport System between the terminal and off-dock yards, or portions of such a system be evaluated. Such systems could include but not be limited to all-electric range and zero-emission hybrid or battery electric trucks, fixed guideway based systems (e.g. magnetic levitation train technologies), hydrogen fuel cell based trucks, and other zero or reduced emission transport technologies in various stages of development, demonstration or feasibility determinations (technical, economic, commercial, etc).

Drayage trucks operating at Port terminals are subject to the Clean Truck Program (CTP) implemented in 2008 by the Ports of Los Angeles and Long Beach. Starting January 1, 2012, all drayage trucks operating at Port terminals must meet USEPA 2007 heavy duty truck emissions standards. In the period since the start of the CTP in 2008, more than 10,000 older drayage trucks

have been replaced with USEPA 2007 emissions compliant trucks at a cost to the State of California and the two ports of more than \$200 million and at a cost to private industry of more than \$800 million. The result has been overall drayage truck emissions reductions of at least 80 percent in cancer causing DPM, and more than a 90 percent reduction in DPM when compared to the oldest drayage trucks that were operating at Port terminals. Analysis of health risk exposure for the proposed Project assumes full compliance with CTP requirements, so the trucks serving the APL Terminal affecting residential cancer risk that are operating on the Terminal Island Freeway are fully compliant with 2007 emission standards. As a result, to further reduce residential cancer risk caused by operation of these trucks, APL would have to require that only trucks with lower DPM emissions than 2007-compliant trucks could operate at its terminal. In light of the more than \$1 billion investment in clean drayage trucks made by the State, the Port, and private industry in the last three years, to require that the drayage industry start replacing these trucks again right away prior to cost recovery is not considered feasible.

In addition, several factors would create a competitive disadvantage for APL if it were required to use zero emission drayage trucks:

- Recharge time for an electric battery truck. EMS understands that the recharge time for an electric battery truck is 4 to 5 hours, and the charge is good for up to 8 hours. This would be insufficient for a truck to be utilized over two contiguous gate shifts. Either the truck would need to be recharged during open gate hours, resulting in reduced utilization or additional trucks would need to be purchased to keep the cargo moving. EMS conservatively estimates that 30 percent more trucks would be needed to provide drayage service to transport containers between Pier 300 and ICTF if electric battery trucks were used.
- Increased cost of zero emission truck versus commercially available diesel engine trucks. The companies providing drayage service to the Port recently converted their fleets to 2007 EPA clean trucks. Under the Port's Clean Truck Program, all trucks had to be replaced by January, 2012. These trucks are not near the end of their useful lives. The near-term cost to replace the 2007 EPA clean trucks with a truck equipped with zero emissions technology would be equal to the entire cost of the new zero-emissions truck—not the differential cost between a zero-emissions truck and a 2007 EPA clean truck. In addition, a company providing drayage service to Pier 300 would have to bear the additional cost to provide 30 percent more trucks due to the need to take trucks out of service for 4 to 5 hour periods to recharge batteries.
- Increased rates and lost business. Higher truck costs incurred by the companies providing drayage service would result in higher rates charged by such companies to the liner companies doing business at EMS. These increased rates would drive intermodal business away from EMS, to other liner companies doing business at terminals that are not required to use zero-emission drayage trucks.

In addition, zero emission drayage trucks are still being evaluated, and although some appear technologically feasible, they are not yet available commercially. Because of this and the competitive disadvantage that such a requirement would place the APL Terminal (the Port prefers a Port-wide approach to zero emission drayage), the recommendations are considered infeasible.

New Alternative – Combine Alternative 5 and 6. The USEPA (USEPA-13 and USEPA-15) recommended that a new alternative that combines the footprint reducing aspect of Alternative 5 with the increase on-dock capacity of Alternative 6 be evaluated to eliminate drayage to near dock railyards. Because not all rail-bound cargo can be handled at an on-dock railyard due to destination differences, the use of near dock yards cannot be eliminated, regardless of terminal

size or on-dock yard capacity. Because of this, this recommendation is considered to be infeasible.

New Alternative – Alternative On-dock Yard Layouts and Transport Systems. The USEPA (USEPA-19) recommended that the EIS evaluate alternative terminal layouts that increase on-dock yard usage, as well as zero emission transport systems. This latter issue is addressed above under New Alternative – Zero Emission Container Transport System, and such drayage alternatives are not considered feasible. Because not all rail-bound cargo can be handled at an on-dock railyard due to destination differences, the use of near dock yards cannot be eliminated, regardless of terminal size or on-dock yard capacity. Alternative 6 includes enough increased on-dock railyard capacity to be handle the percentage of throughput projected in the future. Because of this, the alternatives evaluated represent a reasonable range of alternatives and adequately address on-dock rail capacity.

New Alternative – New Wharf at Berth 301. The USEPA (USEPA-23) recommended that the EIR evaluate a fifth wharf at Berth 301 as a reasonably foreseeable action. Currently, the area immediately behind Berth 301 is unused for terminal purposes. A farther area behind this berth (unconnected to the berth) is comprised of terminal parking. Since Berth 301 is not needed and is not supported by available terminal backlands, it is neither contemplated nor required by the terminal operator at this time. However, if it is needed in the future, the option can be evaluated if and when that time occurs.

Impact AQ-4: Proposed Project operations would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance.

Dispersion modeling of on-site and off-site Project operational emissions was performed to assess the impact of the proposed Project on local ambient air concentrations. A summary of the dispersion modeling results is presented in Table AQ-9 below, and the complete dispersion modeling report is included in Appendix E2 of the Draft EIS/EIR. Maximum off-site ambient pollutant concentrations associated with the proposed Project operations would be significant under CEQA for Federal and state 1-hour NO₂ and state annual NO₂. Therefore, significant impacts under CEQA would occur.

Finding

Mitigation measures **MM AQ-9 through MM AQ-16** have been developed to reduce operational emissions. Implementation of these measures would substantially lessen emissions from criteria pollutants associated with operation of the proposed Project, as listed in Table AQ-10 below. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect identified in the EIS/EIR. However, after mitigation, the maximum mitigated Project operations would still exceed the SCAQMD 1-hour and annual NO₂ ambient thresholds. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, however, as explained below.

Table AQ-9: Maximum Off-site NO₂, SO₂, and CO Concentrations Associated with Operation of the Proposed Project without Mitigation

Pollutant	Averaging Time	Maximum Modeled Concentration of Proposed Project (µg/m ³)	Background Concentration ^b (µg/m ³)	Total Ground Level Concentration ^a (µg/m ³)	SCAQMD Threshold (µg/m ³)
NO ₂ ^c	Federal 1-hour ^d	190	147	336	188
	State 1-hour	241	235	476	339
	State Annual	45	40	85	57
	Federal Annual	45	40	85	100
SO ₂	Federal 1-hour ^d	6	53	60	196
	State 1-hour	10	228	238	655
	24-hour	0.6	32	33	105
CO	1-hour	379	4,600	4,979	23,000
	8-hour	162	2,878	3,040	10,000

Notes:

- a) Exceedances of the thresholds are indicated in bold.
- b) The background concentrations were obtained from the North Long Beach Monitoring Station. The maximum concentrations during the years of 2007, 2008, and 2009 were used.
- c) NO₂ concentrations were calculated using the ozone limiting method (OLM) with ozone data from the North Long Beach monitoring station. The 1-hour NO₂ concentration is calculated using the 98th percentile of the daily maximum 1-hour average to compare with the new federal 1-hour NO₂ standard of 0.100 ppm (188 µg/m³) (effective January 22, 2010).
- d) According to USEPA guidance, the modeled design values, 98th percentile for 1-hour NO₂ and 99th percentile for 1-hour SO₂, are added to the design background values for NO₂ and SO₂. (USEPA, 2011a).

Table AQ-10: Maximum Off-site NO₂ Concentration Associated with Operation of the Proposed Project after Mitigation

Pollutant	Averaging Time	Maximum Modeled Concentration of Proposed Project (µg/m ³)	Background Concentration ^b (µg/m ³)	Total Ground Level Concentration ^{a,e} (µg/m ³)	SCAQMD Threshold (µg/m ³)
NO ₂ ^c	Federal 1-hour ^d	179	147	325	188
	State 1-hour	225	235	460	339
	State Annual	40	40	80	57

Notes:

- a) Exceedances of the thresholds are indicated in bold.
- b) The background concentrations were obtained from the North Long Beach Monitoring Station. The maximum concentrations during the years of 2007, 2008, and 2009 were used.
- c) NO₂ concentrations were calculated using the ozone limiting method (OLM) with ozone data from the North Long Beach monitoring station. The 1-hour NO₂ concentration is calculated using the 98th percentile of the daily maximum 1-hour average to compare with the new federal 1-hour NO₂ standard of 0.100 ppm (188 µg/m³) (effective January 22, 2010).
- d) According to USEPA guidance, the modeled design value (98th) for 1-hour NO₂ is added to the design value background value for NO₂. (USEPA, 2011a).
- e) Emissions might not add precisely due to rounding. For more explanation, refer to the discussion in Section 3.2.4.1 of the Draft EIS/EIR.

Rationale for Finding

Changes or alterations in the form of mitigation measures have been required in or incorporated into the project in the form of **MM AQ-9 through MM AQ-16** which substantially lessen significant operational emissions, as shown in Table AQ-10. Although reduced as a result of the mitigation measures, ambient air concentrations emissions remain significant and unavoidable for 1-hour and annual NO₂. Mitigation measures **MM AQ-9 through MM AQ-16** represent feasible means to reduce air pollution impacts from proposed operational sources.

Public Comment

Public comments were submitted regarding mitigation measures **MM AQ-9, MM AQ-11, MM AQ-12, MM AQ-13, MM AQ-14, MM AQ-15, and MM AQ-16**, as well as other recommended mitigation measures, including a new mitigation measure to require Tier 4 line haul locomotives be used at the Pier 300 on-dock railyard. The public comments were primarily submitted by the U.S. Environmental Protection Agency (USEPA), South Coast Air Quality Management District (SCAQMD), Coalition for a Safe Environment (CFASE), Port of Los Angeles Community Advisory Committee's EIR Subcommittee (PCAC), and an individual (Richard Havenick). These measures are discussed under **Impact AQ-3** above. The responses to comments received on these mitigation measures under **Impact AQ-3** above would also pertain to **Impact AQ-4**, and likewise establish that the recommended mitigation revisions or new measures are infeasible. Please see discussion under **Impact AQ-3** above.

Impact AQ-7: The proposed Project would expose receptors to significant levels of TACs.

A health risk assessment (HRA) spanning 70 years was conducted pursuant to a previous project Protocol reviewed and approved by both CARB and SCAQMD (POLA, 2005), the recent Sunnyvale decision, and in accordance with recent changes to Port protocols and procedures for conducting HRA's (POLA, 2011c). The period 2012-2081 was used as the 70-year exposure period with the greatest combined DPM emissions from proposed Project construction and operation. The HRA was used to evaluate potential health impacts to the public from TACs generated by proposed Project or alternative operations. The Hotspots Analysis and Reporting Program (HARP), version 1.4c (CARB, 2009), was used to perform health risk calculations based on output from the AERMOD dispersion model. The complete HRA report is included in Appendix E3 of the Draft EIS/EIR.

The main sources of toxic air contaminants (TACs) from proposed Project or alternative operations would be DPM emissions from ships, tugboats, terminal equipment, locomotives, and trucks. Proposed Project or alternative construction emissions were also included in the HRA. As shown in Appendix E3 of the EIS/EIR, the contribution from proposed Project construction to the cancer and chronic health risk results would be minor relative to proposed Project operational emissions. However, construction-related emissions would be the main source of acute health risk impacts.

For health effects resulting from long-term exposure, CARB considers DPM as representative of the total health risks associated with the combustion of diesel fuel. TAC emissions from nondiesel sources (such as alternative fuel engines) and noninternal combustion sources (such as auxiliary boilers) also were evaluated in the HRA, although their impacts were minor in comparison to DPM. Since the proposed Project would generate emissions of DPM, **Impact AQ-7** also includes a discussion of the effects of ambient PM on increased mortality and morbidity.

The HRA evaluated three different types of health effects: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index. Individual lifetime cancer

risk is the additional chance for a person to contract cancer after a lifetime of exposure to Project emissions. The “lifetime” exposure duration assumed in this HRA is 70 years for a residential receptor and 40 years for an occupational receptor⁶.

The chronic hazard index is a ratio of the long-term average concentrations of TACs in the air to established reference exposure levels. A chronic hazard index below 1.0 indicates that adverse noncancer health effects from long-term exposure are not expected. Similarly, the acute hazard index is a ratio of the short-term average concentrations of TACs in the air to established reference exposure levels. An acute hazard index below 1.0 indicates that adverse noncancer health effects from short-term exposure are not expected.

For the determination of significance under CEQA, the HRA determined the incremental increase in health effects values due to the proposed Project by estimating the net change in impacts between the proposed Project and CEQA baseline conditions. The incremental health effects values (proposed Project minus CEQA baseline) were compared to the significance thresholds for health risk described in Section 3.2.4.2 of the Draft EIS/EIR.

To estimate residential cancer risk impacts, VOC and DPM emissions were projected over a 70-year period, from 2012 through 2081. To estimate occupational cancer risk impacts, VOC and DPM emissions were projected over a 40-year period, from 2012 through 2051. These 70-year and 40-year projections of emissions were done for the proposed Project and CEQA baseline⁷ to enable a proper calculation of the CEQA cancer risk increments. To calculate the 70-year and 40-year emissions, estimates of activity levels and emission factors were made for each year from 2012 through 2081. The extent of the analysis assumed exposure beyond the lease termination date for the terminal, and therefore is a conservative estimate of proposed Project impacts. Yearly equipment activity levels between the Project analysis years were interpolated for the proposed Project and baseline. Activity levels after 2027 were held constant at their 2027 values. Where applicable, yearly emission factors were allowed to change with time in accordance with normal fleet turnover rates (for terminal equipment, trucks, line haul locomotives, and tugboats), and existing regulations and agreements listed in Tables 3.2-6 and 3.2-7 of the Draft EIS/EIR.

The maximum future CEQA cancer risk increment (Table AQ-11) associated with the unmitigated proposed Project is predicted to exceed the significance threshold for the residential and occupational receptors. The maximum unmitigated cancer risk increment for residential receptors is 25 in a million, and the maximum cancer risk increment for occupational receptors is 16 in a million. Therefore, the future CEQA cancer risk increment would be significant for these two receptor types.

The location identified for the peak residential receptors are at the liveaboards (people who live on boats) for boats docked west of Terminal Island Freeway at Anchorage Road. The cancer risk increment would also exceed the significance threshold at the liveaboards docked in Fish Harbor west of the Project site. However, residential incremental cancer risk would not exceed the significance threshold at any residential areas on the mainland.

The peak occupational location is on the APL Terminal west fence in the southwest corner of the property.

⁶ The 40-year exposure period for the assessment of occupational cancer risk is 2012-2051 for the proposed Project, alternatives, and NEPA baseline and 2008-2047 for the CEQA baseline.

⁷ The 70-year emissions projection for the CEQA Baseline was done for 2008-2077, as this is the 70-year period projected forward from the CEQA Baseline year.

Approximately 99 percent of the cancer risk for all receptors is caused by exposure to DPM. The major source driving the impacts at the peak residential receptor are container trucks traveling on the Terminal Island Freeway going to and from the APL Terminal.

The maximum chronic hazard index future CEQA increment associated with the unmitigated Project is predicted to be less than the CEQA baseline for all receptor types.

The acute hazard index future CEQA increments associated with residential receptors (1.2) and occupational receptors (1.8) would exceed the significance criterion hazard index of 1.0. The maximum residential impact occurs near the Federal prison to the west of the proposed Project boundary. The maximum occupational impact occurs on Pier 400 approximately 400 meters south of the proposed Project boundary. Therefore, the future CEQA acute hazard increment would be significant for these two receptor types.

Table AQ-11: Maximum Incremental CEQA Health Impacts Associated With The Proposed Project Without Mitigation, 2012 – 2081

Health Impact	Receptor Type	Maximum Predicted Impact ^{a,d}					Significance Threshold
		Proposed Project	NOP CEQA Baseline	NOP CEQA Increment ^{b,c}	Future CEQA Baseline	Future CEQA Increment ^{b,c}	
Cancer Risk ^f	Residential ^e	47	130	<0 ^g	22	25 x 10⁻⁶ (25 in a million)	10 x 10 ⁻⁶ (10 in a million)
	Occupational	38	65	<0 ^g	22	16 x 10⁻⁶ (16 in a million)	
	Sensitive	15	60	<0 ^g	8	7 x 10 ⁻⁶ (7 in a million)	
	Student	0.6	1.3	<0 ^g	0.4	0.2 x 10 ⁻⁶ (0.2 in a million)	
	Recreational	5	16	<0 ^g	2	3 x 10 ⁻⁶ (3 in a million)	
Chronic Hazard Index	Residential	0.2	0.5	< 0 ^g	0.5	< 0 ^g	1.0
	Occupational	0.5	0.8	< 0 ^g	0.8	< 0 ^g	
	Sensitive	0.1	0.4	< 0 ^g	0.4	< 0 ^g	
	Student	0.1	0.3	< 0 ^g	0.3	< 0 ^g	
	Recreational	0.1	0.4	< 0 ^g	0.4	< 0 ^g	
Acute Hazard Index	Residential	1.4	0.2	1.2	0.2	1.2	1.0
	Occupational	2.0	0.2	1.8	0.2	1.8	
	Sensitive	0.4	0.06	0.4	0.06	0.4	

	Student	0.4	0.06	0.4	0.06	0.4	
	Recreational	0.6	0.09	0.5	0.09	0.5	

Notes:

- Exceedances of the significance criteria are in **bold**. The significance thresholds apply to the CEQA and NEPA increments only.
- The maximum increments might not necessarily occur at the same receptor locations as the maximum impacts. This means that the increments cannot necessarily be determined by simply subtracting the baseline impacts from the Project impacts. The example given in the text, before the CEQA Impact Determination, illustrates how the increments are calculated.
- The CEQA increment represents Project minus CEQA baseline.
- Data represent the receptor locations with the maximum impacts or increments. The impacts or increments at all other receptors would be less than these values.
- The cancer risk values reported in this table for the residential receptor are based on the 80th percentile breathing rate.
- Construction emissions were modeled with the operational emissions for the determination of cancer risk.
- When the predicted impact is less than zero, the Project risk is less than the respective baseline.

Finding

Mitigation measures **MM AQ-9 through MM AQ-16** have been developed to reduce operational emissions. Implementation of these measures would substantially lessen emissions from criteria pollutants associated with operation of the proposed Project, as listed in Table AQ-12 below. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect identified in the EIS/EIR. However, after mitigation, the maximum mitigated Project operations would still exceed the residential and occupational cancer health risk thresholds, as well as the occupational acute hazard threshold. Therefore, significant unavoidable cancer risk and acute hazards would remain. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, however, as explained below.

Table AQ-12: Maximum Incremental CEQA Health Impacts Associated With The Proposed Project With Mitigation, 2012 – 2081

Health Impact	Receptor Type	Maximum Predicted Impact ^{a,d}					Significance Threshold
		Proposed Project	NOP CEQA Baseline	NOP CEQA Increment ^{b,c}	Future CEQA Baseline	Future CEQA Increment ^{b,c}	
Cancer Risk ^f	Residential ^e	45	– ^g	– ^g	22	23 x 10⁻⁶ (23 in a million)	10 x 10 ⁻⁶ (10 in a million)
	Occupational	29	– ^g	– ^g	18	11 x 10⁻⁶ (11 in a million)	
Acute Hazard Index	Residential	1.0	0.2	0.9	0.2	0.9	1.0
	Occupational	1.3	0.2	1.1	0.2	1.1	

Notes:

- Exceedances of the significance criteria are in **bold**. The significance thresholds apply to the CEQA and NEPA increments only.
- The maximum increments might not necessarily occur at the same receptor locations as the maximum impacts. This means that the increments cannot necessarily be determined by simply subtracting the baseline impacts from the Project impacts. The example given in the text, before the CEQA Impact Determination, illustrates how the increments are calculated.

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- c) The CEQA increment represents Project minus CEQA baseline.
 - d) Data represent the receptor locations with the maximum impacts or increments. The impacts or increments at all other receptors would be less than these values.
 - e) The cancer risk values reported in this table for the residential receptor are based on the 80th percentile breathing rate.
 - f) Construction emissions were modeled with the operational emissions for the determination of cancer risk.
 - g) Unmitigated impacts that were less than the significance threshold were not reanalyzed for mitigation.

Rationale for Finding

Changes or alterations in the form of mitigation measures have been required in, or incorporated into the project in the form of mitigation measures **MM AQ-9 through MM AQ-16** which substantially lessen significant toxic air emissions, as shown in Table AQ-12 above. Although reduced as a result of the mitigation measures, cancer risk remains unavoidable to residential and occupational receptors, and acute hazards remains significant and unavoidable for occupational receptors.

The potential for additional mitigation measures to address residential cancer risk impacts under the future baseline scenario was evaluated by the Port. Since the major source driving cancer risk impacts at the peak residential receptor are the drayage trucks traveling on the Terminal Island Freeway to and from the APL Terminal, the feasibility of mitigating APL-related drayage trucks was considered. Drayage trucks operating at Port terminals are subject to the Clean Truck Program (CTP) implemented in 2008 by the Ports of Los Angeles and Long Beach. Starting January 1, 2012, all drayage trucks operating at Port terminals must meet USEPA 2007 heavy duty truck emissions standards. In the period since the start of the CTP in 2008, more than 10,000 older drayage trucks have been replaced with USEPA 2007 emissions compliant trucks at a cost to the State of California and the two ports of more than \$200 million and at a cost to private industry of more than \$800 million. The result has been overall drayage truck emissions reductions of at least 80 percent in cancer causing DPM, and more than a 90 percent reduction in DPM when compared to the oldest drayage trucks that were operating at Port terminals.

Analysis of health risk exposure for the proposed Project assumes full compliance with CTP requirements, so the APL-related trucks affecting residential cancer risk that are operating on the Terminal Island Freeway are fully compliant with 2007 emission standards. As a result, to further reduce residential cancer risk caused by operation of these APL-related trucks, APL would have to require that only trucks with lower DPM emissions than 2007-compliant trucks could operate at its terminal. In light of the more than \$1 billion investment in clean drayage trucks made by the State, the Port, and private industry in the last three years, to require that the drayage industry start replacing these trucks again right away (prior to their cost recovery) is not considered feasible. Though no formal requirements have been approved at this time, it is expected that additional controls on drayage truck DPM emissions will be required by the State and the Port in the coming years, thereby further reducing DPM emissions and associated residential cancer risk over the 70 year exposure period. No other feasible mitigation of DPM emissions from drayage trucks is available at this time.

Public Comment

Public comments were submitted regarding mitigation measures **MM AQ-9, MM AQ-11, MM AQ-12, MM AQ-13, MM AQ-14, MM AQ-15, and MM AQ-16**, as well as other recommended mitigation measures, including a new mitigation measure to require Tier 4 line haul locomotives be used at the Pier 300 On-dock railyard. The public comments were primarily submitted by the U.S. Environmental Protection Agency, South Coast Air Quality Management District, Coalition for a Safe Environment, Port of Los Angeles Community Advisory Committee's EIR Subcommittee, and an individual (Richard Havenick). These measures are discussed under

Impact AQ-3 above. The responses to comments received on these mitigation measures under **Impact AQ-3** above would also pertain to **Impact AQ-7**, and likewise establish that the recommended mitigation revisions or new measures are infeasible. Please see discussion under **Impact AQ-3** above.

New Mitigation – Alter the Construction Schedule. In addition, the U.S. Environmental Protection Agency submitted comments (USEPA-16 and USEPA-17) requesting that the Port consider altering the construction schedule as mitigation to reduce acute non-cancer health risks. As described in the Draft EIS/EIR, the proposed Project would emit certain emissions whether constructed over a short or longer period of time. Alternating heavy days or weeks of construction with other projects in the area would not reduce the total amount of emissions generated by the proposed Project. Furthermore, alternating construction with other projects would effectively lengthen the total construction schedule, thereby extending other environmental impacts, including construction noise impacts, biological resource impacts, and cumulative impacts. Finally, altering the construction schedule could delay the construction schedule beyond a reasonable amount of time and result in increased construction costs due to escalation of material and labor costs over time. Because of these factors, this measure is not practical or feasible.

Impact AQ-9: The proposed Project would produce GHG emissions that would exceed CEQA and NEPA baseline levels .

In each future project year, annual construction and operational greenhouse gas (GHG) emissions would increase relative to GHG emissions in the CEQA baseline year (2009). For the purposes of this EIS/EIR, any emissions above the CEQA baseline were considered significant under CEQA. Gases that trap heat in the atmosphere are called GHGs. GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Examples of GHGs created and emitted primarily through human activities include fluorinated gases (hydrofluorocarbons and perfluorocarbons) and sulfur hexafluoride. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without these natural GHGs, the Earth's surface would be about 61°F cooler (AEP, 2007). However, emissions from fossil fuel combustion for activities such as electricity production and vehicular transportation have elevated the concentration of GHGs in the atmosphere above natural levels. According to the Intergovernmental Panel on Climate Change (IPCC), 2007, the atmospheric concentration of CO₂ in 2005 was 379 ppm compared to the pre-industrial levels of 280 ppm. In addition, The Fourth U.S. Climate Action Report concluded, in assessing current trends, that CO₂ emissions increased by 20 percent from 1990-2004, while CH₄ and N₂O emissions decreased by 10 percent and 2 percent, respectively. There appears to be a close relationship between the increased concentration of GHGs in the atmosphere and global temperatures. For example, the California Climate Change Center reports that by the end of this century, temperatures are expected to rise by 4.7 to 10.5°F due to increased GHG emissions. Scientific evidence indicates a trend of increasing global temperatures near the earth's surface over the past century due to increased human induced levels of GHGs.

GHGs differ from criteria pollutants in that GHG emissions do not cause direct adverse human health effects. Rather, the direct environmental effect of GHG emissions is the increase in global temperatures, which in turn has numerous indirect effects on the environment and humans. For example, some observed changes include shrinking glaciers, thawing permafrost, later freezing and earlier break-up of ice on rivers and lakes, a lengthened growing season, shifts in plant and animal ranges, and earlier flowering of trees (IPCC, 2001). Other, longer term environmental impacts of global warming may include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the

potential loss of species, and a significant reduction in winter snow pack (for example, estimates include a 30-90 percent reduction in snowpack in the Sierra Mountains). Current data suggests that in the next 25 years, in every season of the year, California will experience unprecedented heat, longer and more extreme heat waves, greater intensity and frequency of heat waves, and longer dry periods.

The main contributors to GHG construction emissions include: (1) transit and hotelling of general cargo vessels during deliveries; (2) tugboats that deliver dike rock; (4) barge equipment used to place wharf pilings; and (5) earth-moving equipment. The main contributors to operational GHG emissions include: (1) vessel movements and at berth in hotelling mode; (2) offloading of crude from vessels and (3) vapor release from tanks.

In addition to GHG, the Project could also potentially contribute black carbon. Black Carbon is a form of carbon produced by incomplete combustion of fossil fuel and wood that may also contribute to climate change. Black carbon aerosols absorb, rather than reflect, solar radiation, which shades the Earth's surface, but warms the atmosphere. In the proposed Project, black carbon would be formed as part of diesel combustion and is a part of DPM.

Finding

GHG emissions would exceed the CEQA baseline in all Project years, and therefore would be a significant impact under CEQA. Although mitigation measures reduce GHG emissions, emissions remain significant and unavoidable. In the Final EIR, mitigation measures **MMs AQ-2 through MM AQ-4** (listed previously), and mitigation measures **MM AQ-9, MM AQ-10, and MM AQ-16** (also previously listed) are identified as reducing GHG emissions from construction and operation. In addition, additional mitigation was identified in the EIS/EIR (mitigation measures **MM AQ-17 through MM AQ-20** to mitigate GHG emissions, as set forth below. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect identified in the Final EIR. However, as the mitigation measures would not reduce emissions to their baseline levels, incorporation of these mitigation measures would not reduce GHG emissions below significance. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or Project alternatives, however, as explained below.

MM AQ-17: Compact Fluorescent Light Bulbs. All interior buildings on the premises shall exclusively use fluorescent light bulbs, compact fluorescent light bulbs, or a technology with similar energy-saving capabilities, for ambient lighting within all terminal buildings. The tenant shall also maintain and replace any Port-supplied compact fluorescent light bulbs.

Fluorescent light bulbs produce less waste heat and use substantially less electricity than incandescent light bulbs. Although not quantified in this analysis, implementation of this measure is expected to reduce the Project's GHG emissions by less than 0.1 percent.

MM AQ-18: Energy Audit. The tenant shall conduct an energy audit by a third party of its choice every 5 years and install innovative power saving technology (1) where it is feasible; and (2) where the amount of savings would be reasonably sufficient to cover the costs of implementation. Such systems help to maximize usable electric current and eliminate wasted electricity, thereby lowering overall electricity use.

This mitigation measure primarily targets large on-terminal electricity consumers such as on-terminal lighting and shoreside electric gantry cranes. These sources consume the majority of on-terminal electricity, and account for about 1 percent of overall Project

GHG emissions. Therefore, implementation of power saving technology at the terminal could reduce overall Project GHG emissions by a fraction of 1 percent.

MM AQ-19: Recycling. *The tenant shall ensure a minimum of 40 percent of all waste generated in all terminal buildings is recycled by 2014 and 60 percent of all waste generated in all terminal buildings is recycled by 2016. Recycled materials shall include: (a) white and colored paper; (b) post-it notes; (c) magazines; (d) newspaper; (e) file folders; (f) all envelopes including those with plastic windows; (g) all cardboard boxes and cartons; (h) all metal and aluminum cans; (i) glass bottles and jars; and; (j) all plastic bottles.*

In general, products made with recycled materials require less energy and raw materials to produce than products made with un-recycled materials. This savings in energy and raw material use translates into GHG emission reductions. The effectiveness of this mitigation measure was not quantified due to the lack of a standard emission estimation approach.

MM AQ-20: Tree Planting. *The applicant shall plant shade trees around the main terminal building, and the tenant shall maintain all trees through the life of the lease.*

Trees act as insulators from weather, thereby decreasing energy requirements. On-site trees also provide carbon storage. Although not quantified, implementation of this measure is expected to reduce Project GHG emissions by less than 0.1 percent.

Rationale for Finding

Climate change, as it relates to man-made GHG emissions, is by nature a global impact. An individual project does not generate enough GHG emissions to significantly influence global climate change by itself (AEP, 2007). The issue of global climate change is, therefore, a cumulative impact. Nevertheless, for the purposes of this EIS/EIR, the Port has opted to address GHG emissions as a Project-level impact, as well as a cumulative impact. GHG emissions are significant and unavoidable for all Project years.

The construction sources for which GHG emissions were calculated include off-road diesel equipment, on-road trucks, marine cargo vessels used to deliver equipment to the site, and worker commute vehicles. The operational emission sources for which GHG emission were calculated include ships, tugboats, yard equipment, on-terminal electricity usage, and worker commute vehicles. Changes or alterations in the form of mitigation measures have been incorporated into the project in the form of mitigation measures **MM AQ-2 through MM AQ-4, MM AQ-9, MM AQ-10, MM AQ-16, and MM AQ-17 through MM AQ-20**, which lessen significant GHG emissions. However, while the mitigation measures presented in the Final EIR reduce emissions, GHG emissions remain significant and unavoidable. The discussion below includes more details on suggested changes to mitigation measures raised in comments on the Draft EIS/EIR.

Public Comment

Measures to reduce operational air emissions would also reduce GHG emissions. Therefore, some of the comments received as part of **Impact AQ-1** and **Impact AQ-3** also pertain to **Impact AQ-9**. As discussed under **Impact AQ-1** and **Impact AQ-3** above, comments were received on the Draft EIS/EIR in regards to further mitigation to reduce either construction or operational air emissions. Comments were received from the U.S. Environmental Protection Agency, South Coast Air Quality Management District, Coalition for a Safe Environment, Port of Los Angeles Community Advisory Committee's EIR Subcommittee, and an individual (Richard Havenick). These comments recommended various changes to mitigation measures or new mitigation

measures, project components, or alternatives, as previously discussed. However, no further comments were received regarding GHG mitigation measures **MM AQ-17 through MM AQ-20**.

The feasibility discussions in regard to mitigation proposed in comments for **Impact AQ-1** and **Impact AQ-3** also apply to mitigation proposed in comments for **Impact AQ-9**.

Biological Resources

As discussed in Section 3.3 of the Draft EIS/EIR, there would be one significant and unavoidable impact to Biological Resources as a result of the proposed Project.

Impact BIO-4c: Operation of the proposed Project could introduce non-native species into the Harbor that could substantially disrupt local biological communities.

The amount of ballast water discharged into the Pier 300 area, and thus, the potential for introduction of invasive exotic species could increase because more and larger container ships would use the Port as a result of the proposed Project (LAHD, 1999). These vessels would come primarily from outside the Exclusive Economic Zone (EEZ) and would be subject to regulations to minimize the introduction of non-native species in ballast water as described in Section 3.3.3.8 of the Draft EIS/EIR. In addition, container ships coming into the Harbor loaded would be taking on local water while unloading and discharging when reloading. This would also diminish the opportunity for discharge of non-native species. Thus, ballast water discharges during cargo transfers in the Harbor would be unlikely to contain non-native species, but is still a possibility.

Non-native algal species can also be introduced via vessel hulls. The California State Lands Commission has issued a report on commercial vessel fouling in California (CSLC, 2006). The Commission recommended that the state legislature broaden the state program and adopt regulations to prevent non-indigenous species introductions by ship fouling. Of particular concern is the introduction of an alga, *Caulerpa taxifolia*. As discussed in Section 3.3.2.7 of the Draft EIS/EIR, this species is most likely introduced from disposal of aquarium plants and water and is spread by fragmentation rather than from ship hulls or ballast water; therefore, risk of introduction is associated with movement of plant fragments from infected to uninfected areas by activities such as dredging and/or anchoring. The Port conducts surveys, consistent with the Caulerpa Control Protocol (NMFS and CDFG, 2008) prior to every water-related construction project to verify that Caulerpa is not present. This species has not been detected in the Harbors and has been eradicated from known localized areas of occurrence in southern California. Therefore, there is little potential for additional vessel operations from the proposed Project to introduce these species.

Undaria pinnatifida, which was discovered in the Port Complex in 2000 (MEC and Associates, 2002), and *Sargassum filicinum* (or *S. horneri*), discovered in October 2003 (MBC, 2004), may be introduced and/or spread as a result of hull fouling or ballast water and, therefore, might have the potential to increase in the Harbor via vessels traveling between ports in the EEZ. Invertebrates that attach to vessel hulls could be introduced in a similar manner.

The proposed Project would result in a gradual increase to an additional 143 vessels per year in 2027 (compared to the CEQA baseline ship calls of 247 at the APL Terminal), which represents an approximately six percent increase in vessel traffic compared to the total number of vessels entering the Port (an average of 2,275 vessel arrivals in 2008-9 [Port of Los Angeles, 2010]). Considering the small discharge of non-local water from container ships (see above) and the ballast water regulations currently in effect, the potential for introduction of additional exotic species via ballast water would be low from vessels entering from outside the EEZ. The potential for introduction of exotic species via vessel hulls would be increased in proportion to the increase

in number of vessels. However, vessel hulls are generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security, 2007). This would reduce the potential for transport of exotic species. For these reasons, the proposed Project has a low potential to increase the introduction of non-native species into the Harbor that could substantially disrupt local biological communities, but such effects could still occur.

The proposed Project would increase the annual ship calls relative to the CEQA baseline. Operation of the proposed Project facilities has the potential to result in the introduction of non-native species into the Harbor via ballast water or vessel hulls and thus could substantially disrupt local biological communities. Impacts, therefore, would be significant under CEQA.

Finding

No feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or even ballast water, due to the lack of a proven technology. The Port of Los Angeles and Port of Long Beach, California State Lands Commission, and the University of Maryland are collaborating with APL to test a shipboard ballast water treatment system designed to remove non-native species from ballast water, and prevent their introduction into harbor waters. If methods become available in the future, they would be implemented as required at that time.

Rationale for Finding

All feasible measures to avoid or lessen the impact of introduction of non-native species have been identified in the EIS/EIR but the risk of an introduction remains a possibility. There are no additional feasible mitigation measures that would reduce the potential for accidental introduction of non-native species, because the potential for such an introduction cannot be eliminated.

Public Comment

Additional Mitigation – Expedited Ballast Water Treatment. One comment (USEPA-28) was received on the Draft EIS/EIR regarding **Impact BIO-4c**. USEPA has requested the Final EIS/EIR consider expedited treatment of ballast water treatment to reduce the significant impact resulting from the introduction of aquatic invasive species (AIS) into the Harbor. Treatment of ballast water to reduce or eliminate potential AIS is an emerging field.

The State of California has regulations in place to eliminate the introduction of AIS via ballast water discharge by the year 2020.⁸ California's interim ballast water discharge performance standards consist of "no detectable" organisms >50 mm in dimension, 0.01 organisms per milliliter (ml) for organisms in the 10–50 μ m range, 10 organisms per ml for bacteria, and 100 organisms per ml for viruses. California's interim performance standards for new vessels went into effect in January 1, 2010 and January 1, 2012 (depending on ballast water capacity), and will go into effect for existing vessels on January 1, 2014 and January 1, 2016 (depending on ballast water capacity). California's current BWM regulations, including the interim performance standards, are currently more stringent than the IMO D-2 standards and proposed VGP.

⁸ Final discharge standard for California is zero detectable living organisms in all size classes beginning January 1, 2020.

The Commenter noted that the USEPA's Science Advisory Board (SAB) determined five types of ballast water treatment systems are available that treat to the Regulation D-2 limits of the International Maritime Convention (IMO), and these same limits (referred to as the D-2 limits) are proposed in the proposed VGP.⁹ Although the USEPA's SAB determined there were several types of systems capable of treating to the limits of the IMO D-2 and proposed VGP standards, they also determined:

“The detection limits for currently available test methods preclude a complete statistical assessment of whether BWMS (ballast water management systems) can meet standards more stringent than IMO-D2/Phase I (page 4).”¹⁰

The Panel also concluded “that it is not reasonable to assume that BWMS are able to reliably meet or closely approach a “no living organisms” standard” (page 4). The California State Lands Commission recently came to a similar conclusion—the inherent uncertainty regarding BWMS performance “is likely to persist over the next several years.”¹¹ The State Lands Commission staff is working with industry experts to develop compliance protocols to ensure that vessel discharges into California waters will be compliant with California law.

California's interim performance standards are extremely stringent, and the technology to effectively treat to such low levels is still in development. Once a specific treatment system shows promise for removing the target organisms from the ballast water, integrating this system onto vessels and training ship crews to effectively operate a new system will take additional time. Therefore, the existing compliance schedule should be considered extremely aggressive.

The U.S. Coast Guard's Shipboard Technology Evaluation Program (STEP) is intended to facilitate the development of effective BWMS technologies, to create more options for vessel owners seeking alternatives to ballast water exchange. The program was established to alleviate concerns regarding the investment in, installation, and operation of an experimental treatment system that might not meet discharge standards mandated by future regulations. Vessels accepted into the STEP may be granted an equivalency to future ballast water discharge standard regulations, for up to the life of the vessel or the system, while their BWM system operates satisfactorily. As summarized in the Draft EIS/EIR, the Port of Los Angeles, Port of Long Beach, California State Lands Commission, and University of Maryland are collaborating with APL to test a shipboard ballast water treatment system designed to eliminate AIS from ballast water. The vessel APL England is one of only five ships currently enrolled in the STEP.¹²

Vessels currently calling at the APL Terminal are subject to: (1) the BWM provisions of the current VGP; (2) the BWM provisions of the U.S. Coast Guard's Ballast Water Management for the Control of Nonindigenous Species in Waters of the U.S.¹³; (3) the provisions and numeric limits of the State's BWM regulations; and (4) Port Tariff Number 4, which prohibits the discharge of ballast water within the Port without permission from the Executive Director. While the USEPA, the U.S. Coast Guard, and other states consider new or revised BWM regulations,

⁹ U.S. Environmental Protection Agency, Science Advisory Board (USEPA SAB). 2011. *Efficacy of Ballast Water Treatment Systems*: a Report by the EPA Science Advisory Board. July 12, 2011.

¹⁰ Phase I refers to the Phase I of the U.S. Coast Guard proposed ballast water regulations (74 FR 44632), which are also identical to the IMO D-2 standards. The proposed standards were published on August 28, 2009, but have not been finalized.

¹¹ Dobroski, N., C. Scianni, and L. Takata. 2011. *2011 Update: Ballast Water Treatment Systems for Use in California Waters*. Prepared for the Calif. State Lands Comm. by the Marine Inv. Sp. Progr. Sept. 1, 2011

¹² See: <http://www.uscg.mil/hq/cg5/cg522/cg5224/step.asp>

¹³ 33 CFR 151. See: <http://www.uscg.mil/hq/cg5/cg522/cg5224/bwm.asp>

California's numeric limitations are currently among the most stringent in the United States, and for many classes and sizes of organisms, are much more stringent than the IMO D-2 standard.

USEPA's request to consider an expedited BWMS implementation schedule is not supported due to (1) the aggressive compliance schedule for vessels operating in California's waters, (2) the lack of ballast water treatment systems that can meet the stringent standards, and (3) the lack of approved compliance verification protocols at both the state and federal levels. Based on past accomplishments, there will be several advances in the field of BWMS technology in the next decade. At this time, however, such systems are not considered feasible as they may not meet state or federal standards.

Cumulatively Considerable Impacts

The State CEQA Guidelines (Section 15130) require an analysis of the project's contribution to significant and unavoidable cumulative impacts. Cumulative impacts include "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines, Section 15355). A total of 146 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the Project that could contribute to cumulative impacts. The 146 projects include projects in the Ports of Los Angeles and Long Beach, the City of Long Beach, the communities of San Pedro, Wilmington, and Carson, and other areas such as Harbor City, Lomita, and Torrance.

The discussion below identifies cumulatively significant impacts that can either be mitigated to less than significant or that cannot be mitigated to a less than significant level and represent significant unavoidable impacts. All feasible mitigation measures to reduce or avoid the cumulatively considerable contribution of the proposed Project to these impacts have been required in, or incorporated into, the proposed Project. The Board has determined that additional proposed mitigation measures and/or alternatives are infeasible in light of specific economic, legal, social, technological, and other considerations and, therefore, have not been required in, or incorporated into, the Project. The evidence of such infeasibility is explained below.

Numerous comment on the Draft EIS/EIR were received from agencies, community groups, and individuals regarding mitigation measures to reduce air quality impacts. According to CEQA Guidelines Section 15130(b): "The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness..." The cumulative analysis presented in the Draft EIS/EIR in Chapter 4, Cumulative Analysis, meets this criterion. Chapter 2 of this Final EIS/EIR contains detailed responses to each particular comment, and where applicable, the responses to the cumulative comments are discussed generally below under each resource.

CEQA limits mitigation measures for cumulative impacts to only those measures that would feasibly and effectively avoid or substantially reduce the cumulatively considerable contribution of a proposed Project to a significant cumulative impact. All mitigation measures that meet that definition are identified in the EIS/EIR. CEQA does not require the mitigation of cumulative impacts above and beyond the cumulatively considerable contribution of a proposed Project. Nevertheless, separate from the CEQA process, the Port has agreed under the TraPac MOU to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by existing Port operations (distinct from the contribution of any proposed project) outside of the context of project-specific CEQA documents. This fund includes, for example, approximately \$6 million for air filtration in schools and funding for an initial study of

off-Port impacts on health and land use in Wilmington and San Pedro, as well as a more detailed subsequent study of off-Port impacts of existing Port operations, examining aesthetics, light and glare, traffic, public safety and effects of vibration, recreation, and cultural resources related to port impacts on harbor area communities. As part of the MOU, the Port would contribute \$3.50 per container received at the proposed Project, up to an amount of approximately \$4 million. While the MOU is not CEQA mitigation per se, it would have particular benefits for harbor area communities where disproportionate effects could occur.

Aesthetics and Visual Resources

Cumulative Impact AES- 4: The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact due to creating a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area –Cumulatively Considerable and Unavoidable

Cumulative Impact AES-4 represents the potential for the proposed Project and related cumulative projects to result in significant cumulative impacts in the cumulative study area through the creation of a new source of substantial light or glare that would adversely affect day or nighttime views.

The Port is a highly urbanized area with a substantial amount of existing nighttime illumination. The major sources of illumination at the Port are the hundreds of down lights and floodlights attached to the tops of the tall light standards, as well as the street and roadway lighting. Other sources include high-intensity boom lights located on top of cranes and floodlights attached to the bottom and sides of the crane that illuminate the crane, the vessel, and the immediately surrounding area during loading or unloading of vessels. Past projects at the Port have contributed to an increase in ambient illumination levels in nearby areas. Thus, the net effect of the past projects has been to create a significant cumulative impact.

As discussed in Section 3.1.4.3.1 of the Draft EIS/EIR (under Cumulative Impact AES-4), the incremental change in ambient lighting conditions associated with the proposed Project on the new 41-aces of backland and associated with the new cranes would not create a substantial change in existing levels of ambient light in sensitive areas in the Project vicinity. Because the lighting has been designed in a way to minimize off-Project light spill, and because of the distance of the planned light fixtures from areas of potential sensitivity, the project lighting will not adversely affect nearby light-sensitive areas. However as the past, present, and reasonably foreseeable future related projects would result in a significant impact related to light and glare, the new backlands and crane lighting from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA.

Finding

No feasible mitigation is available to address the cumulative impact from new lighting. Impacts, therefore, would be cumulatively considerable and unavoidable under CEQA. The Board hereby finds that specific technological considerations make infeasible mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

Past projects at the Port of Los Angeles and in surrounding industrial districts have had the effect of creating sources of unshielded or poorly shielded and directed light that have had the effect of causing light spill and a change in ambient illumination levels in nearby areas. Because of the standards that the Port is now implementing to minimize the lighting impacts of new projects, the contributions of present and future projects to cumulative lighting impacts in the area will be limited. The net effect of the past projects has been to create a significant cumulative impact. The design of the lighting proposed for the Project site incorporates a range of measures to minimize offsite lighting impacts. Given that lighting plan already makes maximum use of measures to attenuate the Project's lighting impacts or those of the alternatives, no additional mitigation measures are available to reduce the Project's contribution to the cumulative lighting impact. Therefore, the proposed Project would make a cumulative considerable unavoidable contribution to a significant cumulative impact.

Public Comments

No public comments were received regarding cumulative lighting impacts of the proposed Project.

Air Quality, Meteorology, and Greenhouse Gases

Cumulative Impact AQ-1: The proposed Project would result in cumulatively considerable increase of a criteria pollutant for which the project region is in nonattainment under a national or state ambient air quality standard – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-1 assesses the potential for proposed Project construction along with other cumulative projects to produce a cumulatively significant increase in criteria pollutant emissions for which the project region is in nonattainment under a national or state ambient air quality standard or for which the SCAQMD has set a daily emission threshold.

Emissions from proposed Project construction would increase relative to CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. These emission increases would combine with construction emission construction projects, which would already be cumulatively considerable. As a result, without mitigation, emissions from proposed Project construction would make a cumulatively considerable contribution to a significant cumulative impact for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions under CEQA.

Mitigation measures **MM AQ-1 through MM AQ-8** would help reduce construction emissions. After mitigation, proposed Project construction emissions would continue to exceed CEQA baseline emissions for VOC, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. Therefore, the proposed Project after mitigation would make a cumulatively considerable and unavoidable contribution to a cumulative significant impact for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions under CEQA.

Finding

While mitigation has been incorporated to reduce impacts, proposed Project construction emissions would continue to exceed CEQA baseline emissions for VOC, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} even with mitigation incorporated. The Board hereby finds that specific technological

considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

Due to its substantial amount of emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion, the South Coast Air Basin is a “severe-17” nonattainment area for 8-hour O₃, a “serious” nonattainment area for PM₁₀, a nonattainment area for PM_{2.5}, and a maintenance area for CO in regard to the National Ambient Air Quality Standards (NAAQS). The South Coast Air Basin is in attainment of the NAAQS for SO₂, NO₂, and lead. In regard to the California Ambient Air Quality Standards (CAAQS), the South Coast Air Basin is presently in nonattainment for O₃, PM₁₀, and PM_{2.5}. The South Coast Air Basin is in attainment of the CAAQS for SO₂, NO₂, CO, sulfates, and lead, and is unclassified for hydrogen sulfide and visibility-reducing particles. These pollutant nonattainment conditions within the project region are therefore cumulatively significant. In the time period between 2012 and 2014, a number of large construction projects will occur at the two ports and surrounding areas that will overlap and contribute to significant cumulative construction impacts. The *2007 Air Quality Management Plan* (AQMP) predicts attainment of all NAAQS within the South Coast Air Basin, including PM_{2.5} by 2014 and O₃ by 2020. However, the predictions for PM_{2.5} and O₃ attainment are speculative at this time.

The construction impacts of the related projects would be cumulatively significant if their combined construction emissions would exceed the SCAQMD daily emission thresholds for construction. Mitigation measures **MM AQ-1 through MM AQ-8** would help reduce construction emissions, however would not reduce impacts below significance. Because this almost certainly would be the case for all analyzed criteria pollutants and precursors (VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}), the related projects would result in a significant cumulative air quality criteria pollutant impact.

Public Comments

General Community Mitigation. One general comment regarding cumulative impacts to air quality and potential mitigation was submitted by the U.S. Environmental Protection Agency (USEPA-6). The USEPA is recommending that the Port consider implementing feasible mitigation measures preferred by the community such as general air quality improvements, education programs, training for economic status improvements and health care access, parks and recreation improvements. In implementing mitigation under CEQA, mitigation measures must mitigate for a significant impact to the environment. The mitigation measures that the USEPA is recommending do not appear to apply to environmental impacts resulting from the proposed Project. Because of this, the Port cannot require the recommendations as project mitigation.

However, as noted above, the Port has agreed under the TraPac MOU to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by existing Port operations (distinct from the contribution of any proposed project) outside of the context of project-specific CEQA documents. This fund includes, for example, approximately \$6 million for air filtration in schools and funding for an initial study of off-Port impacts on health and land use in Wilmington and San Pedro, as well as a more detailed subsequent study of off-Port impacts of existing Port operations, examining aesthetics, light and glare, traffic, public safety and effects of vibration, recreation, and cultural resources related to port impacts on harbor area communities.

Cumulative Impact AQ-2: The construction of the proposed Project would produce emissions that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-2 assesses the potential for proposed Project construction along with other cumulative projects to produce ambient pollutant concentrations that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation.

The SCAQMD develops ambient pollutant thresholds that signify significant increases in criteria pollutant concentrations. Project construction emissions would produce off-site impacts that would exceed the SCAQMD ambient thresholds for Federal and state 1-hour and state annual NO₂, 24-hour and annual PM₁₀, and annual PM_{2.5}. Overlap of proposed Project construction and operations would also result in significant impacts for 24-hour PM₁₀. Any concurrent emissions-generating activity that occurs near the Project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from Project construction could make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_x, PM₁₀, and PM_{2.5} levels under CEQA.

Finding

Mitigation measures **MM AQ-1 through MM AQ-8** have been applied to the Project to help reduce construction emissions. With mitigation, impacts from proposed Project construction would exceed NO₂, PM₁₀ and PM_{2.5} threshold. Construction emissions could still make a cumulatively considerable and unavoidable contribution to a significant impact relative to ambient NO₂, PM₁₀, and PM_{2.5} levels from concurrent related project construction under CEQA.

The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

The past, present, and reasonably foreseeable future projects for Cumulative Impact AQ-2 would result in significant cumulative impacts if their combined ambient pollutant concentrations, during construction, would exceed the SCAQMD ambient concentration thresholds for pollutants from construction. Mitigation measures **MM AQ-1 through MM AQ-8** would help reduce construction emissions; however, they would not reduce impacts below significance. Cumulative air quality impacts from proposed Project construction would exceed NO₂, PM₁₀ and PM_{2.5} threshold. Construction emissions could still make a cumulatively considerable and unavoidable contribution to a significant impact relative to ambient NO₂, PM₁₀, and PM_{2.5} levels from concurrent related project construction under CEQA and NEPA.

Public Comments

Public comments regarding Project-level impacts to air quality were made and are discussed under Project-level **Impact AQ-1** above. Aside from the General Community Mitigation comment made by the USEPA (discussed in **Cumulative Impact AQ-1** above), no public comments were received regarding mitigation or alternatives to address cumulative air quality impacts of the proposed Project.

Cumulative Impact AQ-3: The operation of the proposed Project would produce a cumulatively considerable increase of a criteria pollutant for which the project region is in nonattainment under a national or state ambient air quality standard – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-3 assesses the potential for proposed Project operation along with other cumulative projects to produce a cumulatively significant increase in criteria pollutant emissions for which the project region is in nonattainment under a national or state ambient air quality standard or for which the SCAQMD has set a daily emission threshold.

Peak daily emissions from proposed Project operation would increase relative to CEQA baseline emissions for VOCs and NO_x during one or more project analysis years. These emission increases would combine with operation emissions from other projects near the proposed Project site, which would already be cumulatively significant. As a result, without mitigation, emissions from the proposed Project operation would make a cumulatively considerable contribution to a significant cumulative impact for VOCs under CEQA.

Finding

Mitigation measures **MM AQ-9 through MM AQ-16**, and lease measures **LM AQ-1** and **LM AQ-2** would help reduce operational emissions. After mitigation, peak daily emissions from the proposed Project would increase relative to CEQA baseline emissions for VOCs only. As a result, after mitigation, emissions from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact for VOCs under CEQA.

The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

The other projects would be cumulatively significant if their combined operational emissions would exceed the SCAQMD daily emission thresholds for operations. This almost certainly would be the case for all analyzed criteria pollutants; therefore, the past present and future related projects would result in a significant cumulative air quality criteria pollutant impact. Mitigation measures **MM AQ-9 through MM AQ-16** and lease measures **LM AQ-1** and **LM AQ-2** would help reduce operational emissions; however they would not reduce the Project's contribution below a cumulatively considerable level. Consequently, emissions from operation of the proposed Project would produce cumulatively considerable and unavoidable contributions to a significant cumulative impact for VOCs under CEQA.

Public Comments

Public comments regarding Project-level impacts to air quality were made and are discussed under Project-level **Impact AQ-3** above. Aside from the General Community Mitigation comment made by the USEPA (discussed in **Cumulative Impact AQ-1** above), no public comments were received regarding mitigation or alternatives to address cumulative air quality impacts of the proposed Project.

Cumulative Impact AQ-4: The operation of the proposed Project would produce emissions that cumulatively exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-4 assesses the potential for proposed Project operation along with other cumulative projects to produce ambient concentrations that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation.

The SCAQMD develops ambient pollutant thresholds that identify significant increases in concentrations of these pollutants. Project operational emissions would produce off-site impacts that would exceed the SCAQMD ambient thresholds for Federal and state 1-hour and state annual NO₂ and Federal annual PM_{2.5}. Any concurrent emissions-generating activity that occurs near the Project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from Project operations would make a cumulatively considerable contribution to a significant cumulative impact relative to ambient NO₂ levels under CEQA.

Finding

Mitigation measures **MM AQ-9 through MM AQ-16** and lease measures **LM AQ-1** and **LM AQ-2** be applied to the proposed Project to help reduce operational emissions. With mitigation, impacts from Project operation would exceed NO₂ ambient thresholds. As a result, emissions from operation of the proposed Project would make cumulatively considerable and unavoidable contributions to a significant cumulative impact relative to ambient NO₂ levels under CEQA.

The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

The related projects would result in significant cumulative impacts if their combined ambient concentration levels during operations would exceed the SCAQMD ambient concentration thresholds for operations. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for NO_x, could exceed the thresholds for PM₁₀ and PM_{2.5}, and are unlikely to exceed for CO. As a result, operation of the related projects would result in a significant cumulative air quality impacts related to exceedances of the significance thresholds for NO_x, PM₁₀, and PM_{2.5}. Mitigation measures **MM AQ-9 through MM AQ-16** and lease measures **LM AQ-1** and **LM AQ-2** would help reduce operational emissions; however, they would not reduce impacts below significance. Consequently, emissions from operation of the proposed Project would produce cumulatively considerable and unavoidable contributions to ambient NO₂, PM₁₀, and PM_{2.5} levels under CEQA.

Public Comments

Public comments regarding Project-level impacts to air quality were made and are discussed under Project-level **Impact AQ-3** above. Aside from the General Community Mitigation comment made by the USEPA (discussed in **Cumulative Impact AQ-1** above), no public comments were received regarding mitigation or alternatives to address cumulative air quality impacts of the proposed Project.

Cumulative Impact AQ-7: The proposed Project would exposure receptors to significant levels of toxic air contaminants – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-7 assesses the potential of the proposed Project construction and operation along with other cumulative projects to produce TACs that exceed acceptable public health criteria.

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase cancer risks above future CEQA baseline levels. The cancer risk increases under CEQA would be significant at residential (25 in a million) and occupational (16 in a million) receptors. The location identified for the peak residential receptors are at the liveaboards (people who live on boats) for boats docked west of Terminal Island Freeway at Anchorage Road. The cancer risk increment would also exceed the significance threshold at the liveaboards docked in Fish Harbor west of the Project Site. However, residential incremental cancer risk would not exceed the significance threshold at any residential areas on the mainland.

Therefore under CEQA, the proposed Project would exceed the SCAQMD significant threshold of 10 in a million at several receptor types, and would make a cumulatively considerable contribution to cancer risks relative to the future CEQA baseline. The proposed Project emissions of TACs would also make a cumulatively considerable contribution (although a contribution of less than 10 in a million cases) to cancer risks relative to CEQA baseline levels to sensitive, student and recreational off-site receptor types.

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase acute non-cancer effects from the CEQA baseline to above the 1.0 hazard index significance criterion at residential and occupational receptors in proximity to the Project terminal. Any concurrent emissions-generating activity that occurs near the Project site would add additional airborne health burdens to these significant levels. As a result, without mitigation, emissions from Project construction and operation would make a cumulatively considerable contribution to significant impacts relative to airborne acute non-cancer levels at all receptor types under CEQA

Finding

Mitigation measures **MM AQ-9 through MM AQ-16** would help reduce TACs. With mitigation, construction and operational emissions of TACs under the proposed Project would increase cancer risks from future CEQA baseline levels at all receptor types. Project-level impacts would remain significant for residential receptors and for occupational receptors. While impacts at the other receptor types would be less than significant on a Project-level, emissions of TACs from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact relative to cancer risks relative to CEQA baseline levels to all receptor types.

With mitigation, construction and operational emissions of TACs from the proposed Project would increase acute non-cancer effects from CEQA and NEPA baseline levels to above the 1.0 hazard index significance criterion at occupational receptors in proximity to the Project terminal. Although the increases at residential, recreational, sensitive and student receptors would not exceed the 1.0 hazard index significance criterion, since the mitigated construction and operations under the proposed Project would increase acute non-cancer effects in the Project region, the proposed Project would also contribute to cumulatively considerable and unavoidable impacts relative to ambient non-cancer effects under CEQA at these receptor types.

Levels of TAC emissions from Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years with the implementation of the recently approved 2010

CAAP Update and current and future rules adopted by the CARB and USEPA. Specifically, Port-related DPM emissions are anticipated to decrease by approximately 72 percent by 2014 and 77 percent by 2023 over 2005 levels (POLA, 2010). It is unknown at this time whether these future emission reductions would reduce the cumulative health impacts in the Port region to less than significant levels. However the ports have developed a “health risk reduction standard” that will aim by 2020 to lower the residential cancer risk due to DPM by 85 percent in the port region and communities adjacent to the ports. Although levels of TAC emissions from Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years from these programs and rules, emissions from construction and operation of the proposed Project are assumed to make a cumulatively considerable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under CEQA, and a cumulatively considerable contribution to acute non-cancer levels at all receptor types under CEQA.

The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). In MATES III, completed by SCAQMD, the existing cancer risk from toxic air contaminants was estimated at 1,000 to 2,000 in a million in the San Pedro and Wilmington areas. In the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB, 2006). Based on this information, airborne cancer and noncancer levels within the project region are therefore cumulatively significant.

The Port has approved Port-wide air pollution control measures through their CAAP (LAHD et al., 2006). Implementation of these measures will reduce the health risk impacts from the Project and future projects at the Port. Currently adopted regulations and future rules proposed by the CARB and USEPA also will further reduce air emissions and associated cumulative health impacts from Port operations. However, because future proposed measures (other than CAAP measures) and rules have not been adopted, they have not been accounted for in the emission calculations or health risk assessment for the Project. Therefore, it is unknown at this time how these future measures would reduce cumulative health risk impacts within the Port project area, and therefore, airborne cancer and noncancer impacts within the project region would therefore still be cumulatively significant. **MM AQ-9 through MM AQ-16** would help reduce TACs, however would not reduce impacts below significance.

Public Comments

Public comments regarding Project-level impacts to air quality were made and are discussed under Project-level **Impact AQ-3** and **Impact AQ-7** above. Aside from the General Community Mitigation comment made by the USEPA (discussed in **Cumulative Impact AQ-1** above), no public comments were received regarding mitigation or alternatives to address cumulative air quality impacts of the proposed Project.

Cumulative Impact AQ-9: The proposed Project would contribute to global climate change – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-9 represents the potential of the proposed Project along with other cumulative projects to contribute to global climate change.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine whether a project's GHG emissions, which are at a micro-scale relative to global emissions, make a cumulatively considerable incremental contribution to a macro-scale impact. As noted above, CO₂e emissions in California totaled approximately 483.88 million metric tons in year 2004 (CARB, 2010). As shown in Table 3.2-41 of the Draft EIS/EIR, the proposed Project would produce higher GHG emissions in each future project year compared to CEQA baseline levels. Any concurrent emissions-generating activity that occurs global-wide would add additional GHG emission burdens to these significant levels, which could further exacerbate environmental effects as discussed above and in Chapter 3.2 of the Draft EIS/EIR.

Considering Cumulative Impact AQ-9, which states that any GHG increase over the CEQA baseline is significant, without mitigation, emissions from proposed Project construction and operation would make a cumulatively considerable contribution to a significant cumulative impact relative to global climate change under CEQA.

Finding

Mitigation measures **MM AQ-2 through MM AQ-4, MM AQ-9, MM AQ-10, MM AQ-16, and MM AQ-17 through MM AQ-20** would help reduce GHG emissions. With mitigation, the proposed Project would produce higher GHG emissions in each future project year, compared to CEQA baseline levels. The way in which GHG emissions associated with the proposed Project might or might not influence actual physical effects of global climate change cannot be determined. For these reasons, it is uncertain whether emissions from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact relative to global climate change when considered with the emissions generated by human activity. Nevertheless, as discussed in Chapter 3.2 of the Draft EIS/EIR, existing GHG levels are projected to result in changes to the climate of the world, with significant warming seen in some areas, which, in turn, will have numerous indirect effects on the environment and humans. Considering Cumulative Impact AQ-9, which states that any increase in GHG emissions over the CEQA baseline is significant, emissions from construction and operation of the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant impact relative to global climate change under CEQA.

The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

Scientific evidence indicates a trend of warming global surface temperatures over the past century due at least partly to the generation of GHG emissions from human activities. Some observed

changes include shrinking glaciers, thawing permafrost, and shifts in plant and animal ranges. Credible predictions of long-term impacts from increasing GHG levels in the atmosphere include sea level rise, changes to weather patterns, changes to local and regional ecosystems including the potential loss of species, and significant reductions in winter snow packs. These and other effects would have environmental, economic, and social consequences on a global scale. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission, 2006a). Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. In California alone, CO₂ emissions totaled approximately 477.77 million metric tons in year 2003 (CEC, 2006), which was an estimated 6.4 percent of global CO₂ emissions from fossil fuels. Based upon this information, past, current, and future global GHG emissions, including emissions from projects in the Ports of Los Angeles and Long Beach and elsewhere in California, are cumulatively significant. Mitigation measures **MM AQ-2 through MM AQ-4, MM AQ-9, MM AQ-10, MM AQ-16, and MM AQ-17 through MM AQ-20** would help reduce GHG emissions; however, they would not reduce impacts below significance.

Public Comments

Public comments regarding Project-level impacts to air quality were made and are discussed under Project-level **Impact AQ-1, Impact AQ-3, and Impact AQ-9** above. Aside from the General Community Mitigation comment made by the USEPA (discussed in **Cumulative Impact AQ-1** above), no public comments were received regarding mitigation or alternatives to address cumulative air quality impacts of the proposed Project.

Biological Resources

Cumulative Impact BIO-1: The proposed Project would contribute to a cumulative loss of individuals or habitat of a state or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat – Cumulatively Considerable and Unavoidable

Cumulative Impact BIO-1 represents the potential of the proposed Project along with other cumulative projects to adversely affect state and federally listed endangered, threatened, rare, protected, or Species of Special Concern, or to result in the loss of designated critical habitat.

The increase in vessel traffic associated with the proposed Project would increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. Because of the low probability of vessel strikes, this incremental increase associated with the proposed Project is considered less than significant at the project level. However, the increase in vessel traffic caused by the proposed Project would contribute to overall increases in vessel traffic along the southern California coast, which have contributed to marine mammal mortalities. Therefore, operation of the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes under CEQA.

Noise from impact pile driving during wharf construction could cause seals and sea lions to avoid construction areas during pile driving but would not result in the loss of individuals or habitat and

thus the Project-level impact would be less than significant. However, although it is expected that marine mammals would avoid or voluntarily move away from pile-driving activities, standard condition of approval (**SC BIO-1. Avoid marine mammals**) would be implemented to further reduce impacts to marine mammals during pile-driving activities. Therefore, potential concurrent pile-driving activities are not expected to be cumulatively significant, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to pile driving.

Elegant and Caspian terns have previously nested on the 41-acre backlands, which will be developed as part of the proposed Project. Should development of the backlands overlap with the nesting season, development would result in a significant Project-level impact on nesting if Elegant and Caspian terns are present. Implementation of mitigation measure **MM BIO-1** would reduce potential Project-level impacts to Elegant and Caspian tern nesting due to backlands development on the 41-acre site to less than significant. Other nesting habitat would continue to be available elsewhere in the Port. The conversion of the recently created 41-acre fill area to backlands (e.g., cranes, railyard, and container transfers) would not measurably change the numbers or species of common birds in that area and, thus, would not affect foraging and terns, which would likely find nesting habitat elsewhere in the Port. Therefore, proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to Elegant and Caspian terns from construction activities under CEQA.

Finding

Mitigation measure **MM AQ-10**, requiring ships calling at Berths 302 through 306 to participate in the Vessel Speed Reduction Program (VSRP) reduces the potential for vessel collision with marine mammals for the proposed Project; however, it would not eliminate potential cumulative effects. No other mitigation is available to reduce cumulative impacts related to vessel strikes to below the level of significance; therefore, the potential for operation of the proposed Project to make a significant and unavoidable contribution to a cumulatively considerable residual impact related to vessel strikes under CEQA would remain. The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Implementation of mitigation measure **MM BIO-1**, which requires that nesting surveys be conducted if construction on the 41-acre undeveloped area occurs between February 15 and September 1, would ensure that potential significant impacts to Elegant and Caspian terns nesting would be less than significant.

Standard condition of approval **SC BIO-1**, which requires the establishment of a 100-meter-radius safety zone and the monitoring for marine mammals within the zone would reduce potential cumulative effects from pile driving to marine mammals and ensure that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile-driving.

Rationale for Finding

Past, present, and future projects will increase vessel traffic. Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale, fin whale, humpback whale, sperm whale, southern sea otter, loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and 19 USFWS 1998a, 1998b, 1998c, 1998d; Stinson 1984; Carretta et al. 2001).

Ship strikes have also been documented involving gray, minke, and killer whales. The blue whale, fin whale, humpback whale, sperm whale, gray whale, and killer whales are all listed as endangered under the ESA although the Eastern Pacific gray whale population was delisted in 1994. In Southern California, potential strikes to blue whales are of the most concern due to the migration patterns of blue whales and the established shipping channels. Blue whales normally passed through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north. Blue whales were a target of commercial whaling activities worldwide. In the North Pacific, pre-whaling populations were estimated at approximately 4,900 blue whales, the current population estimate is approximately 3,300 blue whales (NMFS, 2008). Along the California coast, blue whale abundance has increased over the past two decades (Calambokidis *et al.*, 1990; Barlow, 1994; Calambokidis, 1995).

However, the increase is too large to be accounted for by population growth alone and is more likely attributed to a shift in distribution. Incidental ship strikes and fisheries interactions are listed by NMFS as the primary threats to the California population. Operation of many of the past, present, and future projects would result in increased vessel trips to and from the Harbor Complex; therefore, the related projects could potentially increase whale mortalities from vessel strikes, which is considered to be an unavoidable significant cumulative impact.

Although mitigation measure **MM AQ-10** will be implemented at the Project-level, no other feasible mitigation is available to reduce cumulative impacts related to vessel strikes to below the level of significance; therefore, operation of the proposed Project would have a cumulatively considerable and unavoidable impact under CEQA.

Public Comments

No public comments were received regarding mitigation or alternatives to address cumulative biological resource impacts of the proposed Project.

Cumulative Impact BIO-4: The proposed Project would contribute to a cumulatively considerable disruption of local biological communities – Cumulatively Considerable and Unavoidable

Cumulative Impact BIO-4 represents the potential of the proposed Project along with other projects to cause a cumulatively substantial disruption of local biological communities (i.e., from the introduction of noise, light, or invasive species).

The small increase in vessel traffic in the Harbor (6 percent relative to the CEQA baseline) caused by the proposed Project would add to the cumulative potential for introduction of exotic species. Many exotic species have already been introduced into the Harbor, and many of these introductions occurred prior to implementation of ballast water regulations. These regulations would reduce the potential for introduction of non-native species. However, cumulative effects related to the introduction of non-native species have the potential to be cumulatively significant, and the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA.

Finding

The proposed Project could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA. The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Finding

Cumulative marine terminal projects that involve vessel transport of cargo into and out of the Harbor have increased vessel traffic in the past and would continue to do so in the future. These vessels have introduced invasive exotic species into the Harbor through ballast water discharges and via their hulls. Ballast water discharges are now regulated so that the potential for introduction of invasive exotic species by this route has been greatly reduced. The potential for introduction of exotic species via vessel hulls has remained about the same, and use of antifouling paints and periodic cleaning of hulls to minimize frictional drag from growth of organisms keeps this source low. While exotic species are present in the Harbor, there is no evidence that these species have disrupted the biological communities in the Harbor. Biological baseline studies conducted in the Harbor continue to show the existence of diverse and abundant biological communities. However, absent the ability to completely eliminate the introduction of new species through ballast water or on vessel hulls, it is possible that additional invasive exotic species could become established in the Harbor over time, even with these control measures.

No feasible mitigation beyond legal requirements is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water, due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time. Consequently, the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant impact to biological resources under CEQA.

Public Comments

The USEPA (USEPA-28) commented that the Final EIS/EIR should consider expedited implementation of ballast water treatment systems as mitigation to reduce impacts related to the introduction of non-native species to the Harbor. As discussed under Project-level Impact BIO-4c, the State of California has regulations in place to eliminate the introduction of aquatic invasive species via ballast water discharge by the year 2020. California's interim ballast water discharge performance standards consist of "no detectable" organisms >50 millimeters in dimension, 0.01 organisms per milliliter (ml) for organisms in the 10–50 micrometer (μm) range, 10 organisms per ml for bacteria, and 100 organisms per ml for viruses. California's interim performance standards for new vessels went into effect in January 1, 2010 and January 1, 2012 (depending on ballast water capacity), and will go into effect for existing vessels on January 1, 2014 and January 1, 2016 (depending on ballast water capacity). California's current BWM regulations, including the interim performance standards, are currently more stringent than the IMO D-2 standards and proposed VGP.

California's interim performance standards are extremely stringent, and the technology to effectively treat to such low levels is still in development. Once a specific treatment system shows promise for removing the target organisms from the ballast water, integrating this system onto vessels and training ship crews to effectively operate a new system will take additional time. Therefore, the existing compliance schedule should be considered extremely aggressive. At this time, ballast water management systems are not considered feasible as they may not meet state or federal standards.

No other public comments were received regarding mitigation or alternatives to address cumulative biological resource impacts of the proposed Project.

Ground Transportation

Cumulative Impact TRANS-2: The proposed Project operations would not result in a cumulatively considerable long-term impact at study location intersection volume/capacity ratios or level of service –Less than Cumulatively Considerable (with Mitigation)

Cumulative Impact TRANS-2 represents the potential of the proposed Project along with other cumulative projects to significantly impact volume/capacity ratios, or level of service, at intersections within the cumulative transportation area of analysis.

The proposed Project would increase traffic volumes and degrade LOS at intersections within the proposed Project vicinity. The contribution from the proposed Project would be cumulatively considerable for one intersection (Navy Way and Reeves Avenue) in 2020, 2025, and 2027. Therefore, the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA

Finding

Implementation of mitigation measure **MM TRANS-1**, which will re-configure Navy Way and Reeves Avenue when the intersection operates at LOS E or worse, would eliminate the significant cumulative traffic impact at this intersection, thereby eliminating the Project's cumulatively considerable contribution to that cumulative impact. The Board hereby finds that specific mitigation measures would reduce the proposed Project's contribution to a significant cumulative ground transportation impact to a less than significant.

Rationale for Finding

Project level mitigation (**MM TRANS-1**) would be effective in eliminating the significant cumulative traffic impact at the intersection by increasing its turning movement capacity. Therefore, there would be no significant cumulative traffic impact after mitigation under CEQA.

Public Comments

The California Department of Transportation submitted one comment (DOT-3) that recommends that the proposed Project be coordinated with the SCIG project. The Port is the lead agency for proposed SCIG Facility EIR and the SCIG project is a separate project that has been considered in the Cumulative Ground Transportation analysis in the Draft EIR. It should be noted that the the Draft EIR included a cumulative CMP analysis of the freeway system and found that the proposed Project would not result in a cumulative considerable contribution to a significant cumulative freeway system impact.

No other public comments were received regarding mitigation or alternatives to address cumulative traffic impacts of the proposed Project.

Noise

Cumulative Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would result in a cumulatively considerable exceedance in existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use – Cumulatively Considerable and Unavoidable

Cumulative Impact NOI-1 represents the potential of construction activities of the proposed Project along with other cumulative projects to cause a substantial increase in ambient noise levels at sensitive receivers within the cumulative geographic scope.

In the vicinity of Reservation Point and Fish Harbor, projects that could occur concurrently with the proposed Project and would result in potential noise impacts on sensitive receptors include the San Pedro Waterfront Project [#2], Evergreen Container Terminal [#5], Cannery Steam Remediation [#6], Plains All American Oil Marine Terminal [#10], Westway Demolition [#12], Pan-Pacific Fisheries Cannery Buildings Demolition Project [#18], Southwest Marine Demolition Project [#25], Al Larson Boat Shop Improvement Project [#29], the City Dock No. 1 Marine Research Center [#30], and Pier 500 Container Terminal Development [#32].

Pile driving has been identified as having a significant impact under CEQA at Reservation Point. Therefore, the project would have a cumulatively considerable noise impact when combined with any other project that would affect the same receptor locations and occur concurrently with the proposed Project. In addition, the proposed Project would have a greater than 1 dBA temporary increase in ambient noise levels but would not exceed the City's noise impact thresholds at Reservation Point during general construction activities, Fish Harbor during pile driving and general construction activities, and Cabrillo Beach during pile driving activities. While proposed Project individually would not have significant adverse noise impacts, should construction of other projects in the vicinity occur concurrently, the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact at Reservation Point (general construction activities) and Fish Harbor. Given that Cabrillo Beach is located over two miles from the proposed Project site and there is no clear line of sight, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative noise impact at Cabrillo Beach.

Finding

Mitigation measure **MM NOI-1**, which requires the contractor to use a pile driving system, such as an IHC Hydrohammer SC Series or equivalent, would reduce the maximum noise levels during wharf construction. Mitigation measure **MM NOI-2**, which would require installation of temporary noise attenuation barriers suitable for pile driving equipment as needed, would further reduce construction noise. Even with implementation of mitigation measures **MM NOI-1** and **MM NOI-2**, the proposed Project could make a cumulatively considerable contribution to a significant and unavoidable cumulative impact related to noise. No other feasible noise mitigation measures are available that could further reduce noise impacts. The Board hereby finds that specific technological considerations make infeasible additional mitigation measures or Project alternatives which would reduce these impacts to less than significant.

Rationale for Findings

The required controls and temporary noise barriers identified in mitigation measures **MM NOI-1** and **MM NOI-2** would not be sufficient to reduce the projected increase in the ambient noise

level. This is due to the limited distances between the construction noise sources and receivers. Therefore, the impacts to the Harbor Boulevard residents would remain cumulatively considerable and unavoidable.

Public Comments

The Coalition for a Safe Environment submitted comments (CFASE-23) that suggested that the Draft EIS/EIR uses incorrect noise standards and submits several community noise standards for different land uses. The standards CFASE submits are community noise guidelines that are intended to be used at the land use planning level. The Draft EIS/EIR evaluates potential noise impacts based on the significance thresholds contained in the City's 2006 CEQA Thresholds Guide, which is the appropriate standard against which environmental impacts are evaluated.

No other public comments were received regarding mitigation or alternatives to address cumulative noise impacts of the proposed Project.

Environmental Justice

While not a CEQA Impact Section, the EIS/EIR includes an environmental justice analysis. The environmental justice analysis complies with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on minority and low-income populations, and with the Council on Environmental Quality (CEQ) *Guidance for Environmental Justice Under NEPA* (CEQ 1997). This assessment is also consistent with California state law regarding environmental justice.

After implementation of mitigation measures, the proposed Project would result in disproportionate effects on minority and low-income populations as a result of significant unavoidable project and cumulative impacts related to air quality and noise.

Although the proposed Project would result in significant unavoidable impacts (either project –level or cumulative) to Aesthetics and Visual Resources and Biological Resources, these impacts are in resource areas that are not considered disproportionate impacts to low income or minority populations.

Comments were received from the USEPA and the Coalition for a Safe Environment in regards to Environmental Justice. The comments largely focused on two areas:

1. Consider changes to alternatives or mitigation measures to avoid or further mitigate the Project's high and adverse impacts (USEPA-2),
2. Fully offset air quality impacts because the community is already heavily impacts (USEPA-6),
3. Vigorously consider all feasible mitigation strategies, including community-supported mitigation (USEPA-6),
4. Conduct an Environmental Justice Community Fence Line Monitoring Program for noise (CFASE-22),
5. Conduct an Environmental Justice Community Preconstruction Noise Survey prior to construction (CFASE-22),
6. Incorporate specific Environmental Justice Community Noise Standards in the Draft EIS/EIR (CFASE-23),

7. The Port has made premeditated decisions to willfully cause disproportionately higher impacts in Environmental Justice Communities without adequate mitigation to the benefit of others (CFASE-24),
8. The Port has put every Harbor and Freight Corridor Environmental Justice Community in danger (CFASE024),
9. Identify all applicable city, county, regional, state, and federal environmental justice compliance requirements and evaluate the harbor and Freight Corridor communities (CFASE-26),
10. Include an Environmental Justice Plan that includes monitoring and compliance elements to reduce all negative impacts to less than significant (CFASE-26),
11. Establish an Environmental Justice Advisory Community (CFASE-26),
12. Conduct a Health Impact Assessment, Public health Survey, Off-Port Tidelands port Property Community Impact Nexus Study, Micro-EJ Community Climate Change Impact Assessment, Negative Socio-Economic Impact Assessment, and Public Emergency Disaster and Response Plan (CFASE-26),
13. Conduct a Port and APL Project- Public Emergency. Disaster, and Response Plan that involves a proposed Environmental Justice Advisory Community and residents (CFASE-26),

Public Comments

Mitigation Measures and Alternatives:

The comments from the USEPA regarding application of new or revised mitigation measures or alternatives to reduce or fully offset impacts include both general overarching comments and specific recommendations on mitigation or alternatives. In several instances such as mitigation measure **MM AQ-3 (Fleet Modernization for Construction Equipment)** and lease measure **LM AQ-1 (Periodic Review of New Technology and Regulations)**. Mitigation measure **MM AQ-3** has been revised to remove the exemption for import haulers and earth movers that allowed 2004 on-road emission standards for PM₁₀ and NOx instead of USEPA 2007 on-road emission standards. Lease Measure **LM AQ-1** has been revised to reflect a 5-year new technology review period (from the previous 7-year review period). Other recommended mitigation measures and alternatives were deemed to be infeasible at this time (see discussions under the public comments section of Impact AQ-1, Impact AQ-3, and Impact AQ-7 due to infeasibility, primarily because recommended technologies are not yet at the point of being technologically, economically, or commercially feasible, but also because many of the recommendations must be implemented at a Port-wide level once they become feasible.

Environmental Justice Recommendations:

The comments from the Coalition for a Safe Environment included general comments to the effect that the port is intentionally adversely affecting environmental justice communities without adequate mitigation, as well as other recommendations for inclusion in the Draft EIS/EIR, as listed above. Although CFASE may believe that the Port is intentionally not providing adequate mitigation and is putting every harbor and freight corridor community in danger, the port has provided mitigation for the proposed Project, as required under both CEQA and NEPA, and as discussed in the Draft EIS/EIR. Separate from the CEQA process, the Port has agreed under the TraPac MOU to establish a Port Community Mitigation Trust Fund focused towards addressing the overall off-port impacts created by existing Port operations (distinct from the contribution of any proposed project) outside of the context of project-specific CEQA documents. This fund includes, for example, approximately \$6 million for air filtration in schools and funding for an initial study of off-Port impacts on health and land use in Wilmington and San Pedro, as well as a more detailed subsequent study of off-Port

impacts of existing Port operations, examining aesthetics, light and glare, traffic, public safety and effects of vibration, recreation, and cultural resources related to port impacts on harbor area communities.

The recommendation for the Port to perform an Environmental Justice Community Fence Line Monitoring Program for noise is not warranted by the Draft EIS/EIR analysis, which identifies noise impacts from construction to the nearest receptors (live aboards) and provides mitigation to reduce the impact to a less than significant level. To recommendation to conduct an Environmental Justice Community Preconstruction Noise Survey prior to construction is also not warranted because as part of the Draft EIS/EIR, baseline noise monitoring in the surrounding areas was conducted, and formed the baseline against which noise impacts were evaluated. The recommendation to incorporate specific Environmental Justice Community Noise Standards in the Draft EIS/EIR (provided by CFASE) is also not applicable to the Draft EIS/EIR, as the standards are general planning standards that land use planning agencies may use in the development of their general plans. The Draft EIS/EIR properly evaluates noise impacts based on the City's significance threshold for noise, as put forth in the 2006 L.A. CEQA Thresholds Guide. The recommendation to identify all applicable city, county, regional, state, and federal environmental justice compliance requirements and evaluate the harbor and freight corridor communities and to establish an Environmental Justice Advisory Community is noted; however, the environmental justice evaluation in the Draft EIS/EIR complies with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on minority populations and/or low-income populations, and with the Council on Environmental Quality (CEQ) Guidance for Environmental Justice Under NEPA (CEQ 1997).

The recommendation from CFASE to conduct a Port-wide Health Impact Assessment (HIA) is also noted. According to the World Health Organization (WHO), a Health Impact Assessment (HIA) is "*A combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population*". Recommendations are produced for decision makers and stakeholders, with the aim of maximizing the proposal's positive health effects and minimizing the negative health effects. The Draft EIS/EIR included a number of health assessment tools to accomplish the goals of an HIA and therefore, a separate HIA is not warranted. These tools include a full project-specific HRA, criteria pollutant modeling, morbidity/mortality analysis, an Environmental Justice analysis, and a Socioeconomic analysis. These analyses are presented in the EIS/EIR for the proposed Project and all Project alternatives (including the No Project Alternative), allowing the reader, and subsequently the Board (the decision makers) to compare and contrast the benefits and costs among all proposals.

The HRA, as presented in Section 3.2 and Appendix E of the Draft EIS/EIR, examined the cancer risks and the acute and chronic noncancer health risks associated with the proposed Project on the local communities. Health risks are analyzed for five different receptor types: residential, sensitive (elderly and immuno-compromised), student, recreational, and occupational. Health risks are reported over geographical areas (for example, the HRA includes cancer risk isopleths to illustrate risk patterns in the communities). The HRA is based on procedures developed by public health agencies, most notably the California Office of Environmental Health Hazards Assessment (OEHHA). Section 3.2 and Appendix E of the Draft EIS/EIR also include a discussion of some recent studies that link pollution, specifically DPM, to various health impacts including cancer, asthma and cardiovascular disease.

The Environmental Justice Section (Chapter 5) of the Draft EIS/EIR evaluates whether the proposed Project and its alternatives would result in disproportionately high and adverse human

health or environmental impacts on minority populations and low-income populations. The Environmental Justice analysis looks at the Project impacts as assessed in Chapter 3 of the Draft EIS/EIR on minority and low-income individuals in the local communities surrounding the Port. The Socioeconomic section (Chapter 7 of the Draft EIS/EIR) encompasses a number of topical areas including employment and income, population, and housing. Within each of these areas, subtopics include an examination of conditions at different geographical scales that are relevant to the potential impacts associated with implementation of the proposed Project.

In addition to the reasons above, the complexity of individual health outcomes and the fact that they are based on numerous factors involving personal choices as well as environmental factors make public health surveys inaccurate and infeasible for the purpose of identifying the effect of air quality mitigation measures on public health. Therefore, there is no need to do an additional HIA as part of the Final EIS/EIR.

In addition, the purpose of the Draft EIS/EIR is to evaluate the impacts of the proposed Project (and alternatives) on the environment, including areas outside of Port jurisdiction. Impact to such areas include air quality, noise, and traffic, and have been identified in the Draft EIS/EIR. Impact areas evaluated in the Draft EIS/EIR include all the resource areas typically evaluated under both CEQA and NEPA, as well as socio-economic and environmental justice impacts. Because of this, the recommended Off-Port Tidelands port Property Community Impact Nexus Study, Micro-EJ Community Climate Change Impact Assessment, Negative Socio-Economic Impact Assessment, and Public Emergency Disaster and Response Plan are not warranted.

As a matter of public record, the Port however, will track all mitigation measures through the MMRP to ensure their implementation. Tracking will include an annual report to the Board of Harbor Commissioners at a public Board meeting.

Finding Regarding Responses to Comments on the Draft EIS/EIR

The Board of Harbor Commissioners finds that all information added to the EIR after public notice of the availability of the Draft EIS/EIR for public review but before certification merely clarifies or amplifies or makes insignificant modifications in an adequate EIR and does not require recirculation.

After careful consideration of all comments, the Board recognizes that disagreements among experts remain with respect to environmental impacts identified in the Final EIR. Main points of disagreements include assessment of environmental impacts and mitigation related to Air Quality, Noise, and implementation of new technologies not yet determined technically, economically, or commercially feasible. These disagreements are addressed in detail in response to comments. The Board finds that substantial evidence supports the conclusions in the Final EIR.

Alternatives to the Proposed Project

Twenty three alternatives, including the proposed Project, the No Federal Action Alternative, and No Project Alternative, were considered and evaluated in regards to how well each could feasibly meet the basic objectives of the Project and avoid or substantially lessen any of the significant effects of the project. Sixteen of these alternatives were eliminated from detailed consideration either because they could not feasibly meet the basic objectives of the Project and/or because they would not avoid or substantially lessen any of the significant effects of the project, as discussed in Section 2.8.2 and Section 6 of the Draft EIS/EIR. Six of the alternatives (in addition to the proposed Project) were carried forward for further analysis to determine whether they could feasibly meet most of the Project objectives but avoid or substantially lessen any of the significant effects of the project. These six

alternatives are evaluated co-equally with the proposed Project for all environmental resources in Chapter 3 in the Draft EIS/EIR. Chapter 6 of the Draft EIS/EIR compares the proposed Project and these six alternatives and identifies the environmentally preferred and environmentally superior alternative. The six alternatives that were carried through the analysis of impacts in Chapter 3 in conjunction with the proposed Project are:

- Proposed Project
- Alternative 1 – No Project
- Alternative 2 – No Federal Action
- Alternative 3 – Reduced Project: Four New Cranes
- Alternative 4 – Reduced Project: No New Wharf
- Alternative 5 – Reduced Project: No Space Assignment
- Alternative 6 – Proposed Project with Expanded On-Dock Railyard

Reasonable Range of Alternatives

Under both CEQA and NEPA, lead agencies are required to evaluate a “reasonable range” of alternatives but are not required to evaluate every possible alternative. According to the Council on Environmental Quality (CEQ), “[w]hen there are potentially a very large amount of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS.” (CEQ Forty Questions, No. 1b.) Under CEQA, “an EIR need not consider every conceivable alternative to a project” (CEQA Guidelines 15126.6(a)). The “range of alternatives required in 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” (CEQA Guidelines § 15126.6(f)). The Draft EIS/EIR contained six alternatives (seven including the proposed Project), discussed in Section 2.8 and shown in Table A-1 below, provide variations in terminal size and operational intensity compared to the proposed Project. The six alternatives plus the proposed Project constitute a reasonable range of alternatives, which permits the decision makers to make a reasoned choice regarding proposed Project approval (or approval of one of its alternatives), approval with modifications, or disapproval. Furthermore, CEQA does not require an EIR to consider multiple variations on the alternatives analyzed in the Draft EIR. “What is required is the production of information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned. (*Village Laguna of Laguna Beach, Inc. v. Board of Supervisors of Orange County* (1982) 134 Cal.App.3d 1022).

Table A-1: Summary of Proposed Project and Alternatives at Full Build-out (2027)

	Terminal Acres	Annual Ship Calls	Annual TEUs (in millions) ¹	Cranes	Total Dredging in Waters of the U.S.	New Wharves	Other
Proposed Project	347	390	3,206,000	12 new cranes 12 existing cranes 24 total	20,000 cy (along Berth 306)	Berth 306 (1,250 linear feet, or 4 acres)	<ul style="list-style-type: none"> ▪ Reefer & Berth 306 AMP ▪ +41 acres ▪ Upland Improvements
Alternative 1 – No Project	291	286	2,153,000	12 existing cranes	No dredging	No new wharf	
Alternative 2 – No Federal Action	291	286	2,153,000	12 existing cranes	No dredging	No new wharf	<ul style="list-style-type: none"> ▪ Reefer
Alternative 3 – Reduced Project: Four New Cranes	291	338	2,583,000	4 new cranes 12 existing cranes 16 total	No dredging	No new wharf	<ul style="list-style-type: none"> ▪ Reefer
Alternative 4 – Reduced Project: No New Wharf	302	338	2,783,000	6 new cranes 12 existing cranes 18 total	No dredging	No new wharf	<ul style="list-style-type: none"> ▪ Reefer ▪ +41 acres ▪ - 30 acres ▪ Upland Improvements except for Main Gate modifications and 9 acres behind Berth 301
Alternative 5 – Reduced Project: No Space Assignment	317	390	3,206,000	12 new cranes 12 existing cranes 24 total	20,000 cy (along Berth 306)	Berth 306 (1,250 linear feet, or 4 acres)	<ul style="list-style-type: none"> ▪ Reefer & Berth 306 AMP ▪ +41 acres ▪ - 30 acres ▪ Upland Improvements
Alternative 6 – Proposed Project with Expanded On-Dock Railyard	347	390	3,206,000	12 new cranes 12 existing cranes 24 total	20,000 cy (along Berth 306)	Berth 306 (1,250 linear feet, or 4 acres)	<ul style="list-style-type: none"> ▪ Reefer & Berth 306 AMP ▪ +41 acres ▪ Upland Improvements ▪ On-dock rail (expanded)

Alternatives Eliminated from Further Consideration

Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (CEQA Guidelines, Section 15126(f)(2)). Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (CEQA Guidelines, Section 15126.6(c)). The following alternatives were determined to be infeasible and were eliminated from further consideration in the Draft EIS/EIR (additional details regarding reasons for rejection are included in Chapter 6 of the Draft EIS/EIR):

1. Use of West Coast Ports Outside Southern California
2. Expansion of Terminals in Southern California but Outside the Los Angeles Harbor District
3. Lightering
4. Liquefied Natural Gas Terminal Facility
5. Off-site Backlands Alternatives
6. Development of New Landfills and Terminals Outside the Berths 302-305 Terminal Area
7. Other Sites in the Los Angeles Harbor District
8. Narrower Wharves
9. Marine Oil Facility
10. Omni Terminal
11. Alternative Container Transport Systems
12. Fully Electrified Container Terminal
13. Expand Rail Lines to Handle Cargo Quicker
14. No Expansion but Increased Technology to Increase Efficiency
15. Expanded On-Dock Railyard and Addition of New Cranes Only
16. Maximization of Habitat Restoration

Alternatives Analyzed in the EIS/EIR

Chapter 6 of the Draft EIS/EIR contains a detailed comparative analysis of the alternatives that were found to achieve the project objectives, are considered ostensibly feasible, and may reduce environmental impacts associated with the proposed Project.

A summary of the impact analysis for the proposed Project and the Alternatives is shown in Table A-2 below, which identifies the resource areas where the proposed Project or alternative would result in an unavoidable significant impact under CEQA, as discussed in resource analyzes in Chapter 3 of the Draft EIS/EIR. The table also presents the resource areas that would have significant impacts mitigated to less than significant, and less than significant impacts that are further reduced through incorporation of lease measures or standard conditions of approval. Detailed discussions of the resources with unavoidable significant impacts, significant impacts that can be mitigated to less than significant and less than significant impacts that can be further

1 reduced through incorporation of lease measures or standard conditions of approval are provided
 2 in Chapter 6 of the Draft EIS/EIR.

3 As shown on Table A-2, the proposed Project and Alternatives 1 through 6 have significant
 4 unavoidable impacts in the areas of Air Quality, Meteorology and Greenhouse Gases and
 5 Biological Resources.

Table A-2: Summary of CEQA Significance Analysis by Alternative

Environmental Resource Area*	Proposed Project	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Air Quality, Meteorology, and Greenhouse Gases	S	S	S	S	S	S	S
Biological Resources	S	S	S	S	S	S	S
Cultural Resources	L	N	N	L	L	L	L
Geology	L	L	L	L	L	L	L
Ground Transportation	M	S	M	M	M	M	M
Groundwater and Soils	L	N	L	L	L	L	L
Noise	M	L	L	L	L	M	M
Public Services and Utilities	L	L	L	L	L	L	L

Notes:

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

S = Unavoidable significant impact

M = Significant but mitigable impact

L = Less than significant impact (not significant)

N = No impact

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 7 Table A-3 ranks the alternatives based on a comparison of their environmental impacts with those
 8 of the proposed Project. The ranking is based on the significance determinations for the resource
 9 areas contained in Table A-2, as discussed in Chapter 3 of the Draft EIS/EIR, and reflects
 10 differences in the levels of impact among alternatives. This ranking also takes into consideration
 11 the relative number of significant impacts that are mitigated to a level below significance, and the
 12 number of impacts that remain significant after mitigation.

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Table A-3: Comparison of Alternatives* to the Proposed Project

Environmental Resource Area*	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Air Quality, Meteorology, and Greenhouse Gases	-2.0	-2.0	-1.5	-1.0	0.5	-0.5
Biological Resources	-2.0	-2.0	-1.5	-1.0	0.0	0.0
Cultural Resources	-2.0	-2.0	-2.0	-1.0	0.0	0.0
Geology	-2.0	-2.0	-1.0	-0.5	0.0	0.0
Ground Transportation	1.5.0	-2.0	-1.5	-1.0	0.5	-0.5
Groundwater and Soils	-2.0	-2.0	-1.5	-0.5	0.0	0.0
Noise	-2.0	-2.0	-1.5	-1.0	0.0	0.0
Public Services and Utilities	-2.0	-2.0	-1.5	-1.0	0.0	0.0
Total	-12.5	-16	-12	-7	1	-1

Ranking (best to worst)	Alt 2	Alt 1	Alt 3	Alt 4	Alt 6	Alt 5
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Notes:

* Alternatives eliminated from further consideration are not included.

(-2) = Impact considered to be substantially less when compared with the proposed Project.

(-1) = Impact considered to be somewhat (but not substantially) less when compared with the proposed Project.

(0) = Impact considered to be equal to the proposed Project.

(1) = Impact considered to be somewhat (but not substantially) greater when compared with the proposed Project.

(2) = Impact considered to be substantially greater when compared with the proposed Project.

Where significant unavoidable impacts would occur across numerous alternatives but there are impact intensity differences between those alternatives, decimal points are used to differentiate alternatives (i.e., in some cases, there are differences at the individual impact level, such as differences in number of impacts or relative intensity).

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Environmentally Superior Alternative

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As shown in the table above, Alternative 2 – No Federal Action is the environmentally superior alternative because it would involve only small amounts of new construction, and growth in operations would be greatly reduced as compared to the proposed Project and Alternatives 3 through 6, and the significant traffic impact at Navy Way and Reeves Avenue would be mitigated to less than significant level (as opposed to Alternative 1, which would have a significant unavoidable impact). Alternative 2 ranked first in terms of the least overall environmental impact when compared to the CEQA baseline (Table A-3) because it would result in the least impact on

1 air quality, meteorology, and greenhouse gases, biological resources, cultural resources, geology,
2 ground transportation, groundwater and soils, noise, and public services and utilities when
3 compared to all other alternatives. Therefore, in accordance with CEQA, Alternative 2 is deemed
4 to be Environmentally Superior.

5 **Alternatives Suggested as Part of Public Comment on the Draft EIS/EIR**

6 Three comment letters were received from the U.S. Environmental Protection Agency, the South
7 Coast Air Quality Management District, and the Coalition for a Safe Environment on the Draft
8 EIS/EIR requesting the Port analyze nine additional Alternatives or alternative project
9 components to the proposed Project. The recommendations are similar to one another in some
10 cases, but are categorized as follows:

- 11 ■ Maximize on-dock rail consistent with the 2006 San Pedro Bay Ports Rail Study
12 (SCAQMD),
- 13 ■ Consider a new alternative or modified Alternative 6 with a fully electric terminal
14 (feasible in 1-3 years) and increased on-dock to eliminate drayage to near docks (USEPA
15 and CFASE),
- 16 ■ Consider a new alternative or combine Alternatives 5 and 6 that increases on-dock
17 capacity, reduces the terminal footprint, and makes excess on-dock capacity available to
18 other terminals (USEPA),
- 19 ■ Consider a new alternative with improved layouts to increase on-dock rail that uses zero
20 emission and hybrid rail transportation systems (USEPA),
- 21 ■ Consider a new component that uses Zero Emission Container Transport Technologies as
22 an alternative transport system between the terminal and near dock yards. Technologies
23 could include on-road electric vehicles or fixed guide way systems such as maglev.
24 (SCAQMD and CFASE),
- 25 ■ Consider a new alternative that is comprised of an all-automated container terminal (zero
26 emissions), including a U-shaped Dock (CFASE),
- 27 ■ Build rail lines to the docks to more efficiently move containers to near and off dock
28 locations and use Maglev or alternative freight systems (CFASE),
- 29 ■ Consider an alternative container transport system that include maglev, other zero
30 emission, or all electric transport system (CFASE),
- 31 ■ Consider a 5th wharf at Berth 301 (USEPA),

32 Detailed responses to these recommendations are provided in Chapter 2, Response to Comments,
33 of the Final EIS/EIR, as well as under the Public Comments discussions above under **Impact**
34 **AQ-3**.

35 **CEQA Findings for Alternatives Analyzed**

36 The LAHD operates the Port under the legal mandates of the Port of Los Angeles Tidelands Trust
37 (Los Angeles City Charter, Article VI, Section 601) and the California Coastal Act (PRC
38 Division 20 Section 30700 *et seq.*), which identify the Port and its facilities as a primary
39 economic and coastal resource of the State of California and an essential element of the national
40 maritime industry for the promotion of commerce, navigation, fisheries, and Harbor operations.
41 Activities should be water dependent and the LAHD must give highest priority to navigation,

1 shipping, and necessary support and access facilities to accommodate the demands of foreign and
2 domestic waterborne commerce. The LAHD is chartered to develop and operate the Port to
3 benefit maritime uses, and it functions as a landlord by leasing Port properties to more than 300
4 tenants.

5 Current projections estimate that, assuming planned capacity expansions and handling efficiency
6 improvements occur, Port Complex throughput capacity constraints would be experienced in
7 2035 at 43.2 million TEUs. The throughput projections assume completion of planned physical
8 and operational improvements to terminals within the Port Complex, including the proposed
9 Project.

10 Providing the capacity needed to manage the projected level of cargo throughput is critical for the
11 Port to fulfill its role of facilitating trade along the Pacific Rim, which is expected to grow with
12 anticipated increases in population and foreign trade. The Port also is instrumental to the regional
13 and national markets.¹⁴

14 Additionally, a purpose of the proposed Project or alternative is to optimize and expand the cargo
15 handling capacity at the APL Terminal to accommodate the increased throughput demand
16 expected at the Port, including at the APL Terminal, in the long-term, while also maintaining
17 consistency with established Port policies pertaining to the environment.

18 **Project Objectives:**

19 The following Project objectives were considered for the Alternatives analysis:

- 20 ■ Optimize the use of existing land at Berths 302-305, the proposed Berth 306 backlands,
21 and associated waterways in a manner that is consistent with the LAHD's public trust
22 obligations;
- 23 ■ Improve the container terminal at Berths 302-306 to more efficiently work larger ships
24 and to ensure the terminal's ability to accommodate increased numbers and sizes of
25 container ships;
- 26 ■ Increase accommodations for container ship berthing, and provide sufficient backland
27 area and associated improvements for optimized container terminal operations, at Berths
28 302-306;
- 29 ■ Incorporate modern backland design efficiencies into improvements to the existing
30 vacant landfill area at Berth 306; and
- 31 ■ Improve the access into and out of the terminal and internal terminal circulation, at
32 Berths 302-306 to reduce the time for gate turns and to increase terminal efficiency

¹⁴ It should be noted that the previously cited forecast and capacity studies are Port-wide studies and do not consider the market conditions of individual shipping companies and terminal operators. There are competitive differences between container terminals within the Ports, and each terminal's market share will reflect these differences at any given point in time.

1 **Alternative 1: No Project**

2 Under the No Project Alternative, the existing APL Terminal would continue to operate as an
3 approximately 291-acre container terminal. The No Project Alternative would handle
4 approximately 2,153,000 (or 2.15 million) TEUs by 2027, which would result in 286 annual ship
5 calls at Berths 302-305 with 572 associated tugboat operations. In addition, this alternative would
6 result in up to 7,273 peak daily truck trips (1,922,497 annual), and up to 2,336 annual one-way
7 rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305
8 terminal would continue to do so.

9 Under Alternative 1, no further Port action or federal action would occur. The Port would not
10 construct and develop additional backlands, wharves, or terminal improvements. No new cranes
11 would be added, no gate or backland improvements would occur, and no infrastructure for AMP
12 at Berth 306 or automation in the backland area adjacent to Berth 306 would be provided. This
13 alternative would not include any dredging, new wharf construction, or new cranes. The No
14 Project Alternative would not include development of any additional backlands because the
15 existing terminal is berth-constrained and additional backlands would not improve its efficiency.
16 The No Project Alternative would not preclude future improvements to the APL Terminal;
17 however, any change in future use or new improvements with the potential to significantly impact
18 the environment or improvement would need to be analyzed in a separate environmental
19 document.

20 Any future legally enacted Port-wide CAAP measure, such as a tariff change or emissions impact
21 fee, would be applied to the No Project alternative, although generally applicable tariff changes
22 that conflict with the terms of an individual operating lease would not apply. Those CAAP
23 measures that would be implemented through a lease modification or mitigation measure also
24 would not apply.

25 **Finding**

26 The Board hereby finds that the Alternative 1: No Project would not feasibly meet any of the
27 Project Objectives, and on that basis, rejects the No Project alternative.

28 **Facts in Support of Finding**

29 When compared against the CEQA baseline, the No Project Alternative would result in reduced
30 environmental impacts compared to the proposed Project at the final out year because its
31 operational capacity and level of capital development would be lower. The reduced
32 environmental impacts include fewer aesthetic impacts (no new cranes), less air quality impacts
33 (no construction and less operational emissions), no impact to biological or water resources (no
34 wharf construction or dredging), less impact from ground traffic (lower throughput), and lower
35 noise impacts (related to reduced truck trips and reduced construction). The existing terminal is
36 not operating at its optimal capacity, meaning it could accommodate certain levels of increasing
37 throughput demand, resulting in higher impacts compared to the CEQA baseline period of July
38 2008 through June 2009.

39 However, Alternative 1 would result in one significant and unavoidable ground transportation
40 impact at the intersection of Navy Way and Reeves Avenue that would not occur under the
41 proposed Project. Although it would generate less traffic than the proposed Project, Alternative 1
42 would have a significant and unavoidable impact because mitigation cannot be applied, as there
43 would be no discretionary action under CEQA.

44 Although the No Project Alternative would generally result in a reduced level of unavoidable
45 significant adverse impacts compared to the proposed Project, it would not meet the Project's
46 stated needs under CEQA to optimize existing lands and waterways, improve the terminal's

1 ability to accommodate increased numbers and sizes of container vessels, provide increased
2 backland accommodations for improved terminal operations, make use of the backlands area
3 behind Berth 306, or improve access and gate efficiencies into and out of the terminal. Because
4 of this, the No Project Alternative is not considered to be a viable Project alternative that could
5 achieve the project objectives.

6 Thus, based on the analyses in Chapter 3 of the Draft EIS/EIR, with the exception of ground
7 transportation impacts, the No Project Alternative would result in reduced environmental impacts
8 compared to the proposed Project, but would not meet the overall project purpose or objectives
9 under CEQA.

10 **Alternative 2: No Federal Action**

11 Under the No Federal Action Alternative, only the activities and impacts likely to occur absent a
12 USACE permit would occur, even if they would require a local action. For purposes here, this
13 alternative includes only the following Project elements, which would not affect the throughput
14 capacity of the existing terminal:

- 15 ■ The conversion of a portion of the dry container storage unit area to storage for an
16 additional 200 reefer units, and associated electrical infrastructure.
- 17 ■ Installation of utility infrastructure at various areas in the backlands (e.g., relocation of
18 light pole and electrical line extensions to accommodate the converted reefer areas).

19 The site would continue to operate as an approximately 291-acre container terminal where
20 containers are loaded on and unloaded from vessels, are temporarily stored on backlands, and
21 where containers are transferred to and from trucks and rail cars. Based on the throughput
22 projections, the No Federal Action Alternative would handle up to approximately 2,153,000 (or
23 2.15 million) TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305 with
24 572 associated tugboat operations. In addition, this alternative would result in up to 7,273 peak
25 daily truck trips¹⁵ (1,922,497 annual), and up to 2,336 annual one-way rail trip movements.
26 Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue
27 to do so.

28 Any future legally enacted Port-wide CAAP measure, such as a tariff change or emissions impact
29 fee, would be applied to this alternative, although generally applicable tariff changes that conflict
30 with the terms of an individual operating lease would not apply. Those CAAP measures that
31 would be implemented through a lease modification or mitigation measure also would not apply.

32 **Finding**

33 The Board hereby finds that the Alternative 2: No Federal Action would not feasibly meet any of
34 the Project Objectives, and on that basis, rejects the No Federal Action alternative.

35 **Facts in Support of the Finding**

36 When compared against the CEQA baseline, the No Federal Action Alternative would result in
37 reduced environmental impacts compared to the proposed Project at the final out year because its
38 operational capacity and level of capital development would be lower. The reduced
39 environmental impacts include fewer aesthetic impacts (no new cranes), less air quality impacts

¹⁵ Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

1 (no construction and less operational emissions), no impact to biological or water resources (no
2 wharf construction or dredging), less impact from ground traffic (lower throughput), and lower
3 noise impacts (related to reduced truck trips and reduced construction). The existing terminal is
4 not operating at its optimal capacity, meaning it could accommodate certain levels of increasing
5 throughput demand, resulting in higher impacts compared to the CEQA baseline period of July
6 2008 through June 2009.

7 Although the No Federal Action Alternative would result in fewer unavoidable significant
8 adverse impacts than the proposed Project, it would not meet the Project's stated needs under
9 CEQA to optimize existing lands and waterways, improve the terminal's ability to accommodate
10 increased numbers and sizes of container vessels, provide increased backland accommodations
11 for improved terminal operations, make use of the backlands area behind Berth 306, or improve
12 access and gate efficiencies into and out of the terminal. Because of this, the No Federal Action
13 Alternative is not considered to be a feasible Project alternative that could achieve the project
14 objectives.

15 Thus, based on the analyses in Chapter 3 of the Draft EIS/EIR, the No Federal Action Alternative
16 would result in reduced environmental impacts compared to the proposed Project, but would not
17 meet the overall project purpose or objectives under CEQA.

18 **Alternative 3 – Reduced Project: Four New Cranes**

19 Alternative 3 is similar to the No Federal Action Alternative, but provides four new cranes that
20 accommodates slightly higher throughput. Under Alternative 3, four cranes would be added to
21 the existing wharf along Berths 302-305 and the following terminal improvements would be
22 made:

- 23 ■ The conversion of a portion of the dry container storage unit area to storage for an
24 additional 200 reefer units, and associated electrical infrastructure.
- 25 ■ Installation of utility infrastructure at various areas in the backlands (e.g., relocation of
26 light poles and electrical line extensions to accommodate the converted reefer areas).

27 Under Alternative 3, the total terminal size would remain at approximately 291 acres (it would
28 not provide for the development of the 41 acres created by the Channel Deepening Project),
29 which would be less than the proposed Project. Aside from the above improvements, this
30 alternative would not include the addition or improvement of backland facilities, the construction
31 of a new wharf, or the relocation and improvement of various gates and entrance lanes.

32 Throughput under Alternative 3 would be less than the proposed Project, with an expected
33 throughput of approximately 2,583,000 (or 2.58 million) TEUs by 2027. This would translate
34 into 338 annual ship calls at Berths 302-305 with 676 associated tugboat operations. In addition,
35 this alternative would result in up to 8,725 peak daily truck trips¹⁶ (2,306,460 annual) including
36 drayage, and up to 2,544 annual one-way rail trip movements.

37 Alternative 3 assumes implementation of existing and future legally required measures in
38 compliance with CARB requirements, and CAAP measures under the terms of the modified
39 lease that would accompany this alternative, along with any mitigation measure legally imposed
40 under CEQA.

¹⁶ Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

1 **Finding**

2 The Board hereby finds that although Alternative 3 would result in reduced environmental
3 impacts compared to the proposed Project, Alternative 3 would not support the projected increase
4 in throughput demand, would not meet the basic Project objective of optimizing container-
5 handling capacity at the Project site, and would not make the best use of the Project site as a
6 water-dependent use. As a result, the Board finds that Alternative 3 is not a feasible alternative to
7 the proposed Project, in that it would not accomplish fundamental Project goals and objectives.

8 **Facts in Support of the Finding**

9 When compared against the CEQA baseline, Alternative 3 would result in reduced environmental
10 impacts compared to the proposed Project because its operational capacity and its level of capital
11 development would be lower. Alternative 3 would include fewer upland improvements, such as
12 the number of cranes (16 versus 24), number of berths (4 versus 5), a smaller site area (291 versus
13 347 acres), and a substantially lower annual throughput (2,583,000 annual TEUs compared to
14 3,206,000 annual TEUs). Alternative 3 also would not include 1,250 lf of additional wharf (to
15 create Berth 306) or impacts associated with pile installation and wharf construction (shade).

16 Operationally, Alternative 3 would result in fewer annual ship calls (338) compared to the 390
17 annual ship calls of the proposed Project. Given the Project purpose, Alternative 3 would not
18 support the projected increase in throughput demand, would not optimize container-handling
19 capacity and efficiency in the Pier 300 Channel and at the Project site, and would not make the
20 best use of the Project site as a water-dependent use. As a result, Alternative 3 is not a feasible
21 alternative to the proposed Project, in that it would not accomplish fundamental Project goals and
22 objectives.

23 **Alternative 4 – Reduced Project: No New Wharf**

24 Under this alternative, EMS would add six cranes to the existing terminal and develop the 41-acre
25 fill area adjacent to the EMS terminal as container yard backlands. EMS would, however,
26 relinquish the 30 acres of backlands currently under a space assignment agreement. EMS would
27 not add the nine acres of land behind Berth 301 or the two acres at the main gate to its permit.
28 Configuration of all other landside terminal components (i.e., Main Gate improvements) would
29 be identical to the proposed Project. Because no new wharf would be constructed at Berth 306,
30 the 41-acre backland would be operated using traditional methods and would not be expected to
31 transition to use of automated equipment.

32 Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the
33 proposed Project. Throughput under Alternative 4 would be less than the proposed Project, with
34 an expected throughput of approximately 2,783,000 (or 2.78 million) TEUs by 2027. This would
35 translate into 338 annual ship calls at Berths 302-305 with 676 associated tugboat operations. In
36 addition, this alternative would result in up to 9,401 peak daily truck trips¹⁷ (2,485,050 annual)
37 including drayage, and up to 2,563 annual one-way rail trip movements.

38 Alternative 4 assumes implementation of existing and future legally required measures in
39 compliance with CARB requirements, and CAAP measures under the terms of the modified
40 lease that would accompany this alternative, along with any mitigation measure legally imposed
41 under CEQA.

¹⁷ Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

1 **Finding**

2 The Board hereby finds that although Alternative 4 would result in reduced environmental
3 impacts compared to the proposed Project, Alternative 4 would not support the projected increase
4 in throughput demand, would not meet the basic Project objective of optimizing container-
5 handling capacity at the Project site, and would not make the best use of the Project site as a
6 water-dependent use. As a result, the Board finds that Alternative 4 is not a feasible alternative to
7 the proposed Project, in that it would not accomplish fundamental Project goals and objectives.

8 **Facts in Support of the Finding**

9 When compared against the CEQA baseline, Alternative 4 would result in reduced environmental
10 impacts compared to those experienced under the proposed Project. The decreased
11 environmental impacts would occur from fewer construction activities (e.g., no new wharf at
12 Berth 306); reduced operational activity associated with the lower TEU throughput; and direct
13 ship, truck, and rail emissions. These reduced environmental impacts include fewer aesthetic
14 impacts (18 cranes compared to 24 for the proposed Project), fewer air quality impacts (less
15 operational emissions), fewer biological or water resource impacts (no wharf construction), fewer
16 ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips).

17 Operationally, Alternative 4 would result in fewer annual ship calls (338 calls) compared to the
18 390 annual ship calls of the proposed Project. Given the Project purpose, Alternative 4 would not
19 support the projected increase in throughput demand, would not maximize container-handling
20 capacity and efficiency in the Pier 300 Channel and at the Project site, and would not make the
21 best use of the Project site as a water-dependent use. As a result, Alternative 4 is not a feasible
22 alternative to the proposed Project, in that it would not accomplish fundamental Project goals and
23 objectives.

24 **Alternative 5 – Reduced Project: No Space Assignment**

25 Alternative 5 would be the same as the proposed Project, except that EMS would relinquish the
26 30 acres of backlands under space assignment. This alternative 5 would improve the existing
27 terminal, construct a new wharf (1,250 ft) creating Berth 306, add 12 new cranes to Berths 302-
28 306, add 56 acres for backlands, wharfs, and gates improvements, construct electrification
29 infrastructure in the backlands behind Berths 305-306, and relinquish the 30 acres currently on
30 space assignment. The level of capital development (Cargo-handling Equipment) in the retained
31 acreage may need to be increased to offset the loss of the space assignment. As with the
32 proposed Project, the 41-acre backlands and Berth 306 under Alternative 5 could utilize traditional
33 container operations, electric automated operations, or a combination of the two over time.
34 Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately 20,000 cy)
35 would occur, with the dredged material beneficially reused, and/or disposed of at an approved
36 disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if
37 needed, disposed of at an ocean disposal site (i.e., LA-2).

38 Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less than the
39 proposed Project. TEU throughput would be the same as the proposed Project, with an expected
40 throughput of approximately 3,206,000 (or 3.2 million) TEUs by 2027. This would translate into
41 390 annual ship calls at Berths 302-306 with 780 associated tugboat operations. In addition, this
42 alternative would result in up to 11,361 peak daily truck trips¹⁸ (3,003,157 annual) including

¹⁸ Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

1 drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside
2 terminal components would be identical to the existing terminal.

3 Alternative 5 assumes implementation of existing and future legally required measures in
4 compliance with CARB requirements, and CAAP measures under the terms of the modified
5 lease that would accompany this alternative, along with any mitigation measure legally imposed
6 under CEQA.

7 **Finding**

8 The Board hereby finds that Alternative 5 would not result in substantially reduced environmental
9 impacts compared to the proposed Project, but would in fact have slightly increased
10 environmental impacts compared to the proposed Project. Alternative 5 would meet the project
11 goals and objectives the same as the proposed Project. However, Alternative 5 is ranked slightly
12 lower than the proposed Project due to slightly greater impacts. Because of this, the proposed
13 Project is preferred over Alternative 5.

14 **Facts in Support of the Finding**

15 Alternative 5 manages and handles the same level of throughput as the proposed Project on a
16 slightly smaller area (because the 30-acre area under space assignment would be relinquished).
17 The more compressed terminal operations would result in slightly higher air quality and
18 transportation impacts due to a slightly higher number of workers, equipment, and truck trips
19 required to efficiently process the throughput. This would result in slightly greater air emissions
20 and ground transportation impacts than the proposed Project, though these impacts would be
21 significant and unavoidable under both Alternative 5 and the proposed Project. Given the Project
22 purpose and objectives, Alternative 5 would support the projected increase in throughput demand
23 as would the proposed Project, and would also make efficient use of the terminal area. As a
24 result, the Project objectives could be accomplished by Alternative 5 as well as with the proposed
25 Project. However, because of the slightly higher level of impacts, the proposed Project is
26 preferable to Alternative 5 in accomplishing the Project goals and objectives.

27 **Alternative 6 – Proposed Project with Expanded On-Dock Railyard**

28 Alternative 6 would be the same as the proposed Project; however, LAHD would redevelop and
29 expand the existing on-dock railyard. The current on-dock railyard can accommodate up to 64
30 five-platform double-track railcars (equivalent to nearly three full trains) and consists of 8 sets of
31 double tracks. Maximum throughput capacity through the facility is estimated to be
32 approximately 1.04 million TEUs per year. The expansion of the on-dock facility under
33 Alternative 6 would involve the addition of a ninth set of double tracks, which would increase
34 this component's throughput capacity to approximately 1.14 million TEUs per year. Under this
35 alternative, approximately 10 acres of backlands would be removed from container storage for the
36 railyard expansion.

37 Alternative 6 would improve the existing terminal, develop the existing 41-acre fill area as
38 backlands, add 1,250 ft of new wharf creating Berth 306, and dredge the Pier 300 Channel along
39 Berth 306. Under this alternative, EMS would also add 12 new cranes to the wharves along
40 Berths 302-306, for a total of 24 cranes. As with the proposed Project, the 41-acre backlands
41 adjacent to Berth 306 under Alternative 6 could utilize traditional container operations, electric
42 automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel
43 along Berth 306 would occur (removal of approximately 20,000 cy of material), with the dredged
44 material beneficially reused and/or disposed of at an approved disposal site (such as the CDF at

1 Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean
2 disposal site (i.e., LA-2).

3 Under Alternative 6, the total gross terminal acreage would be 347 acres. The TEU throughput
4 would be the same as the proposed Project, with an expected throughput of approximately
5 3,206,000 (or 3.2 million) TEUs by 2027. This would translate into 390 annual ship calls at
6 Berths 302-306 with 780 associated tugboat operations. In addition, this alternative would result
7 in up to 10,830 peak daily truck trips¹⁹ (2,862,760 annual) including drayage, and up to
8 2,953 annual one-way rail trip movements. Configuration of all other landside terminal
9 components would be identical to the existing terminal.

10 **Finding**

11 The Board hereby finds that Alternative 6 would not result in substantially reduced environmental
12 impacts compared to the proposed Project, and would not eliminate any significant impact of the
13 proposed Project. Alternative 6 would meet the project goals and objectives, and would have
14 marginally reduced impacts compared to the proposed Project, due to expanded on-dock railyard
15 operations between 2025 and 2027. However, the marginal difference is very small (a reduction
16 of less than one percent of operational emissions, compared to the proposed Project) and would
17 occur only at the end of the lease term. Because of this, both the proposed Project and
18 Alternative 6 are considered equal in terms of overall environmental effect.

19 However, this Alternative is not considered a feasible alternative means of avoiding or reducing
20 significant environmental impacts of the proposed Project, since the Alternative would require
21 substantial capital expenditure to achieve a very small marginal environmental benefit that would
22 occur only at the end of the proposed lease term. Because of this, the proposed Project is
23 preferred over Alternative 6.

24 **Facts in Support of the Finding**

25 Alternative 6 manages and handles the same level of throughput as the proposed Project on the
26 same size terminal area. Relative to the CEQA baseline, Alternative 6 would result in similar
27 environmental impacts to the proposed Project because its operational capacity would be the
28 same. These environmental impacts include similar aesthetic impacts (24 cranes for Alternative 6
29 and the proposed Project), similar but slightly less air quality impacts (due to a very slight
30 increase in use of on-dock rail facilities after 2025 and associated marginally fewer truck trips for
31 drayage), equal biological or water resource impacts, and similar but slightly reduced ground
32 traffic impacts (slightly fewer operational truck trips).

33 Given the Project purpose and objectives, Alternative 6 would support the projected increase in
34 throughput demand as would the proposed Project, and would also make efficient use of the
35 terminal area. As a result, the Project objectives could be accomplished by Alternative 6 as well
36 as with the proposed Project. However, the marginally lower air quality emissions under
37 Alternative 6 are less than one percent difference than the proposed Project and occur at the end
38 of the lease term. In addition, since the expanded on-dock yard capacity would not be used until
39 about 2025, the marginal benefits do not justify the capital expenditure to expand the on-dock
40 yard. Based on LAHD's engineering cost estimate, the on-dock yard expansion is estimated at
41 approximately \$10 million. Because of this, although this Alternative would accomplish the
42 Project goals and objectives, it is not considered a feasible alternative means of reducing or
43 avoiding the significant environmental impacts of the proposed Project.

¹⁹ Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

1 **Summary**

2 Based on the alternatives discussion provided in the Final EIR and the information above, the
3 Board determines the proposed Project is the feasible alternative that, when taking into account
4 environmental and economic factors, best meets project objectives of optimizing the use of
5 existing land and associated waterways at the Project site; improving the container terminal to
6 more efficiently work larger ships and to ensure the terminal’s ability to accommodate increased
7 numbers and sizes of container ships; increasing accommodations for container ship berthing and
8 backlands management; incorporating modern backland design efficiencies into improvements to
9 the existing vacant landfill area at Berth 306; and improving access into and out of the terminal
10 and internal terminal circulation to reduce the time for gate turns and to increase terminal
11 efficiency.

12 **III. Statement of Overriding Considerations**

13 Pursuant to Section 15093 of the CEQA Guidelines, the Board must balance the benefits of the
14 proposed Project against unavoidable environmental risks in determining whether to approve the
15 project. The proposed Project would result in significant unavoidable impacts to Air Quality and
16 Biological Resources. The proposed Project would also result in a cumulatively considerable
17 contribution to significant cumulative impacts to Aesthetics, Air Quality, Biological Resources,
18 Ground Transportation, and Noise.

19 **Aesthetics**

20 As provided in the Findings above, there will also be cumulative aesthetic construction and
21 operational impacts (see **Cumulative Impact AES-4**) that would remain significant and
22 unavoidable

23 **Air Quality:**

24 The proposed Project would result in significant unavoidable impacts to air quality during
25 construction and operation even with the adoption and implementation of mitigation measures.
26 Specifically, construction emissions would exceed all SCAQMD thresholds (**Impact AQ-1**) both
27 with and without mitigation for VOCs, CO, NO_x, SO_x, PM₁₀ and PM_{2.5}. Project construction
28 would also result in offsite ambient air pollutant concentrations that exceed the SCAQMD
29 threshold of significance (**Impact AQ-2**) for PM₁₀ and NO₂.

30 Operation of the proposed Project would result in emissions that exceed daily SCAQMD
31 thresholds (**Impact AQ-3**) for VOC in 2025 and 2027 after mitigation. Project operation would
32 also result in offsite ambient air pollutant concentrations that exceed the SCAQMD threshold of
33 significance (**Impact AQ-4**) for NO₂.

34 After mitigation, the proposed Project would result in a residential cancer risk of 23 in a million
35 and an occupational cancer risk of 11 in a million, both of which exceeds the 10 in a million
36 threshold (**Impact AQ-7**). The proposed Project would also result in a post-mitigation acute
37 hazard index for residential receptors of 1.1, which exceeds the 1.0 threshold (**Impact AQ-7**).

38 Due to lack of clear regulatory guidance, the Port adopted for analysis of this project a no net
39 increase significance criteria for GHG emissions. Impacts from GHG emissions would be
40 significant after mitigation (**Impact AQ-9**). The Port will implement mitigation measures for
41 direct impacts that will substantially reduce impacts, however, the impacts would still remain
42 significant and unavoidable (Impacts AQ-1, AQ-2, AQ-3, AQ-4, AQ-7 and AQ-9).

1 As provided in the Findings above, there will also be cumulative air quality construction and
2 operational impacts (see **Cumulative Impact AQ-1** through **Impact AQ-4**, **Impact AQ-7** and
3 **Impact AQ-9**) that would remain significant and unavoidable.

4 **Biological Resources:**

5 Operation of the proposed Project could introduce non-native species into the Harbor that could
6 substantially disrupt local biological communities (**Impact NIO-4**). No feasible mitigation is
7 currently available to totally prevent introduction of invasive species via vessel hulls or even
8 ballast water, due to the lack of a proven technology. Therefore, this impact is considered
9 significant and unavoidable.

10 As provided in the Findings above, there will be cumulative biology impacts (See **Cumulative**
11 **Impact BIO-1** and **BIO-4**) that would remain significant and unavoidable.

12 **Noise:**

13 As provided in the Findings above, there will be cumulative noise impacts (See **Cumulative**
14 **Impact NOI-1**) that would remain significant and unavoidable.

15 **Project Benefits**

16 The proposed Project offers several benefits that outweigh the unavoidable adverse
17 environmental effects of the project. The Board of Harbor Commissioners adopts the following
18 Statement of Overriding Considerations. The Board recognizes that significant and unavoidable
19 impacts will result from implementation of the Project, as discussed above. Having (i) adopted all
20 feasible mitigation measures, (ii) rejected as infeasible any alternatives which would avoid or reduce
21 the significant impacts of the proposed Project, as discussed above, (iii) recognized all significant,
22 unavoidable impacts, and (iv) balanced the benefits of the Project against the Project's significant and
23 unavoidable impacts, the Board hereby finds that the benefits outweigh and override the significant
24 unavoidable impacts for the reasons stated below.

25 The below stated reasons summarize the benefits, goals, and objectives of the proposed Project and
26 provide the rationale for the benefits of the Project. These overriding considerations justify adoption
27 of the Project and certification of the completed Final EIR. Many of these overriding considerations
28 individually would be sufficient to outweigh the adverse environmental impacts of the Project. These
29 benefits include the following:

- 30 ■ **Fulfills Port legal mandates and objectives.** The proposed Project would fulfill the
31 Port's Tidelands Trust to promote and develop commerce, navigation and fisheries, and
32 other uses of statewide interest and benefit including industrial, and transportation uses.
33 The Coastal Act identifies the Port as an essential element of the national maritime
34 industry and obligates the Port to modernize and construct necessary facilities to
35 accommodate deep-draft vessels and to accommodate the demands of foreign and
36 domestic waterborne commerce and other traditional and water dependent and related
37 facilities in order to preclude the necessity for developing new ports elsewhere in the
38 state. Further the Coastal Act provides that the Port should give highest priority to the
39 use of existing land space within harbors for port purposes, including, but not limited to
40 navigational facilities, shipping industries and necessary support and access facilities.
41 The project would also meet the Mayor's goal and the Port's strategic objectives
42 including the goal to "grow the Port green" which for this project includes maximizing
43 the efficiency and the capacity of facilities, including mitigation measures that adhere to
44 and/or exceed CAAP requirements, maintaining financial self-sufficiency through the
45 long term lease while raising environmental standards and protecting for public health.

1 The strategic plan also calls for developing more and higher quality jobs. The Proposed
2 Project provides significant high quality operational and construction employment while
3 still providing for long-term air quality improvements as provided below.

- 4 ■ **Implements the San Pedro Bay Clean Air Action Plan (CAAP).** Project-specific
5 standards implemented through CEQA are one of several mechanisms for meeting CAAP
6 requirements (see CAAP Executive Summary p. 23).
- 7 ■ **Provides new jobs during the life of the project.** Operation of the proposed Project will
8 create approximately 7, 993 direct and secondary long term jobs by 2027. Annual pay for
9 direct, indirect and induced jobs is estimated to exceed \$50,000 per job/per year. Annual
10 tax revenues contributed by all workers would be \$137.6 million by 2027.
- 11 ■ **Provides new construction jobs.** Project construction would generate approximately
12 3,370 direct and indirect jobs. Aggregate wages during the two year construction period
13 for direct and secondary jobs would be about \$144.5 million (2009 dollars), which
14 averages approximately \$43,000 per job per year. Annual tax revenues contributed by all
15 workers for the peak construction activity year would reach approximately \$21.7 million.
- 16 ■ **Approval of a lease with terminal operator will provide Harbor Fund Revenues.**
17 APL Terminal operations will generate approximately revenues to the Port of Los
18 Angeles over the life of the project. These funds are included in the Harbor Revenue
19 fund for the purposes of operating, maintaining and improving the Port in accordance
20 with the Tidelands Trust. Revenues from Container Terminal operation also provides for
21 environmental improvements, including incentive programs associated with the CAAP
22 for reduction of truck emissions and advancing clean technology and form the basis for
23 the ability to construct infrastructure necessary to implement waterfront commercial and
24 recreational improvements in Wilmington and San Pedro.
- 25 ■ **The project would provide tax revenues.** Annual tax revenues contributed from
26 construction for would reach \$21.7 million. Annual tax revenues contributed from
27 operation would reach \$137.6 million.
- 28 ■ **Efficient Accommodation of Increased Throughput.** The Project would allow the
29 terminal to implement efficiency measures such as new efficient cranes, a deeper berth,
30 longer wharves, and new truck gates that will allow the terminal to achieve its maximum
31 capacity.

32 In summary, the Project will allow the Port to meet its legal mandates to accommodate growing
33 international commerce, will permit LAHD to continue to comply with the CAAP and other
34 measures designed to reduce overall emissions over time, and provide jobs to the local economy.
35 The Board hereby finds that the benefits of the proposed Project described above outweigh the
36 significant and unavoidable environmental effects of the project, which are therefore considered
37 acceptable.

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Findings of Fact and Statement of Overriding Considerations

Suggested Mitigation Measures and Alternatives

The following is a list of comments that contain suggested mitigation measures and alternatives. These mitigation and alternatives were suggested to reduce impacts on Air Quality and Environmental Justice, some of which would be significant and unavoidable. For all suggested mitigation measures and/or alternatives found to be infeasible, the Findings of Fact includes an infeasibility determination. In addition, comments were received that suggested revisions to lease measures.

Mitigation Measures, Lease Measures, Standard Conditions of Approval and/or Alternatives Modified In or Added to the Final EIS/EIR

Air Quality:

Construction (Impact AQ-1)

Comments SCAQMD-10: Revised MM AQ-3 to be sticker with the removal of the exceptions for import haulers and earth moving equipment.

Comments SCAQMD-11, PCAC-8, and RH-5: Revised MM AQ-4 to require all construction equipment to meet the cleanest off-road engine emission standard available, and be equipped with Level 3 CARB verified DECS.

Operations (Impact AQ-3)

Comment USEPA-3: lease measure LM AQ-1 has been revised to reflect a revision of the 7 year lease reopener to a more stringent 5 year reopener.

Biological Resources:

Construction (Impact BIO-4a)

Comment NMFS-7: A new standard condition of approval (SC BIO-2) was added to the Final EIS/EIR that would require the Los Angeles Harbor Department (LAHD) to notify the National Marine Fisheries Service (NMFS) no less than 14 calendar days prior to commencing construction, dredging, and disposal operations associated with the proposed Project. LAHD will also notify NMFS no less than five calendar days prior to completion of construction, dredging, and disposal operations.

Mitigation Measures and/or Alternatives Found to be Infeasible

Air Quality:

Cumulative Health Impacts

Comment USEPA-6: Consider all feasible mitigation strategies/measures, such as fund proactive measures to improve air quality and general health in neighboring homes, schools, and other sensitive receptors; provide public education programs about environmental health impacts to better enable residents to make informed decisions; engage in proactive measures to train and hire local residents for construction or operation of the project to improve their economic status and access to health care; and expand and improve local community parks and recreation system, in areas where air quality is highest, in order to provide increased access to open space and exercise opportunities.

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Construction (Impacts AQ-1 and AQ-2)

Comment USEPA-25: Revise MM AQ-1 to require Tier 4 harbor craft as of January 2015 and also require contractor to provide proof that the cleanest Tier is unavailable in California, Oregon or Washington before allowing the use of a lower Tier harbor craft.

Comments PCAC-6 and RH-3: Revise MM AQ-1 to utilize Tier 3 engines or cleaner and remove exceptions until enhanced reduction controls.

Comments USEPA-22, SCAQMD-14, and SCAQMD-22: Revise MM AQ-3 to commit to meeting cleanest engines, such as zero-emission equipment.

Comments PCAC-7 and RH-4: Revise MM AQ-3 to require covered trucks also onsite and require EPA 2007 or better on-road emission standards for PM10 and NOx.

Comments PCAC-10 and RH-7: Revise MM AQ-4 to require off-road construction equipment idling be restricted to maximum of 5 minutes with no exception.

Comments PCAC-9 and RH-6: Revise MM AQ-7 to require better technology within a defined schedule after available.

Operations (Impacts AQ-3 and AQ-4)

Comments PCAC-11 and RH-9: Revise MM AQ-9 to increase implantation rate of Alternative Maritime Power.

Comment USEPA-8 and USEPA-10: Further development of the Ocean Going Vessel (OGV) Clean Air Action Plan (CAAP) measures and revisions to MM AQ-10 and MM AQ-11 is necessary to achieve emission reductions for OGVs.

Comment SCAQMD-12: Amend MM AQ-11 to include a minimum commitment on the percentage of ships calling which meet the new emission standards.

Comment SCAQMD-13: Amend MM AQ-12 to include a detailed schedule for operators to perform a feasibility study on retrofitting their existing ships including commitment on the percentage of ships which would be retrofitted to use advance emission reduction technologies.

Comments PCAC-12 and RH-10: Revise MM AQ-12 to incorporate all emission reduction technology when retrofitting ships bound to Port and eliminate having tenant determine the feasibility of incorporation.

Comments USEPA-17 and SCAQMD-8: Include zero emission equipment.

Comment USEPA-18: Revise MM AQ-16 to limit diesel truck idling at the APL Terminal to 5 minutes.

Comments USEPA-22, SCAQMD-14, and SCAQMD-22: Revise MM AQ-13, MM AQ-14, and MM AQ-15 to commit to meeting cleanest engines, such as zero-emission equipment.

Comment SCAQMD-15: Add mitigation that requires accelerated introduction of Tier 4 line haul locomotives at the APL Terminal.

Comments PCAC-13 and RH-12: Add to LM AQ-1 specific requirements for implementation of new technologies.

Comments PCAC-14 and RH-13: Revise LM AQ-2 to add an implementation schedule and remove allowance of replacing existing measures pending approval by the Port.

1 Comments CFASE-5, CFASE-7, CFASE-8, CFASE-9, CFASE-10, and CFASE-13: Require
2 implementation of various advanced technologies and require that all feasible and cost-effective
3 technologies be required, such as MagLev/AMECS/ALECS/Aero-emission technology trains,
4 maximize use of Alameda Corridor, incorporate on-dock rail built dockside to shipside, use
5 more efficient operating system and terminal layout, noise suppression technologies, more
6 frequent inspection of truck/reefer A/C units, and installation of air purification systems in
7 homes, schools, child care, etc. near train and truck transportation centers.

8 Comments RH-8 and RH-11: Require utilization of best available control technology,
9 accelerate equipment turnover or install emissions reduction devices.

10 ***Construction and Operation (Impact AQ-7)***

11 Comment USEPA-16: Add additional mitigation, such as altering the construction schedule or
12 using high emitting equipment only when emissions would otherwise be low.

13 **Biological Resources:**

14 ***Operation (Impact 4c)***

15 Comment USEPA-28: Consider adding a mitigation measure to expedite implementation of
16 ballast water treatment to reduce the significant impact of introducing non-native species into
17 the Harbor.

18 ***Construction (Impact 5)***

19 Comment NMFS-6: Develop, in consultation with USACE and NMFS, and other relevant
20 resource agencies, a plan to compensate for the reduction in habitat quality of 2.7 acres of
21 nearshore embayment/essential fish habitat.

22 **Hazards/Hazardous Materials:**

23 ***Construction and Operation (Impacts RISK 3a and RISK 3b)***

24 Comment CFASE-24: Mitigate the fact that there is no Port or APL Project Public Emergency,
25 Disaster & Response Plan.

26 **Environmental Justice:**

27 Comment CFASE-22: Require that an Environmental Justice Community Preconstruction
28 Noise Survey be conducted prior to construction.

29 **Ground Transportation:**

30 ***Cumulative Ground Transportation Impacts***

31 Comment DOT-1: When project trips create cumulative impacts on a highway, mitigation
32 measures including capacity enhancement and fair-share funding contributions are warranted.

33 **Miscellaneous:**

34 Comment USEPA-14: Recommend including an alternative that minimizes backland footprint
35 and maximize on-dock rail system.

36 Comment USEPA-23: Analyze a fifth berth at Pier 300 (i.e., Berth 301).

37 Comment CFASE-11: Require inclusion of an Off-Port Tidelands Property Community Nexus
38 Impact Study and Health Impact Assessment

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