

DRAFT Findings of Fact and Statement of Overriding Considerations

Berth 97-109 [China Shipping] 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 Berth 97-109 (China Shipping) Container Terminal 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 Objectives

Los Angeles Harbor Department operates the Port under legal mandates under the Port of Los Angeles Tidelands Trust (Los Angeles City Charter, Article VI, Sec. 601) and the Coastal Act (PRC Div 20 Section 30700 *et seq.*), which identify the Port and its facilities as a primary economic/coastal resource of the state and an essential element of the national maritime industry for promotion of commerce, navigation, fisheries and harbor operations. According to the Tidelands Trust, Port-related activities should be water dependent and should give highest priority to navigation and shipping, as well as provide necessary support and access facilities for accommodating the demands of foreign and domestic waterborne commerce.

The overall purpose of the proposed Project is to expand and optimize² the cargo-handling efficiency and capacity of the Port at Berths 97-109 to address the need to optimize Port lands and terminals for current and future containerized cargo handling. This purpose would be accomplished through the construction of a marine terminal of approximately 142 acres that would accommodate an annual throughput of up to 1.5 million TEUs.

The LAHD's overall objective for the proposed Project is threefold: (1) provide a portion of the facilities needed to accommodate the projected growth in the volume of containerized cargo through the Port; (2) comply with the Mayor's goal for the Port to increase growth while mitigating the impacts of that growth on the local communities and the Los Angeles region by implementing pollution control measures, including the elements of the Clean Air Action Plan (CAAP) applicable to the proposed Project; and (3) comply with the Port Strategic Plan to maximize the efficiency and capacity of terminals while raising environmental standards through application of all feasible mitigation measures.

Although these interrelated goals require increases in the cargo-handling efficiency and capacity of existing terminal facilities in the Port where feasible, the goals also reflect the need for the development of new container terminals in the Port complex to accommodate future cargo demands. To accomplish these basic objectives in a manner consistent with LAHD public trust responsibilities, the following supporting objectives need to be accomplished:

1. Establish and expand a new container facility in the West Basin to the extent required to:
 - a) Optimize the use of existing land and waterways and be consistent with the overall use of allowable uses under the Port Master Plan
 - b) Accommodate foreseeable containerized cargo volumes through the Port
 - c) Increase container handling efficiency and create sufficient backland area for container terminal operations, including storage, transport, and on/offloading of container ships in a safe and efficient manner
 - d) Improve or construct container ship berthing and infrastructure capacity where necessary to accommodate projected containerized cargo volumes through the Port

² *To optimize* means to make as functional as possible; whereas, *to maximize* means to use to the maximum extent possible. As part of the proposed Project, the Port seeks to develop the Berth 97-109 terminal to allow the maximum cargo throughput in the most efficient manner (for example, the terminal at full buildout will be able to accommodate larger, more efficient ships). For the purposes of this document, the word *optimize* will be used; however, the environmental analysis assumes the maximum throughput levels allowed based on the terminal's physical capacity. Actual throughput levels might be lower due to changes in consumer demand patterns and/or economic conditions.

- e) Provide access to land-based rail and truck infrastructure locations capable of minimizing surface transportation congestion or delays while promoting conveyance to local and distant cargo destinations
- f) Provide needed container terminal accessory buildings and structures to support containerized cargo-handling requirements

West Basin Transportation Improvements Program EIR Lawsuit and Stipulated Judgment

The Port previously prepared and certified the West Basin Transportation Improvements Program (WBTIP) EIR that assessed the proposed construction and operation of terminal and infrastructure improvements in the West Basin of the Port (LAHD, 1997). The document programmatically analyzed the impacts of the development of three separate container terminals in the West Basin: the China Shipping Terminal, the Yang Ming Terminal, and the TraPac Terminal.

In March 2001, the Port issued a permit approving not only the lease of Berths 97-109 (China Shipping Container Terminal) but also the construction based on the WBTIP EIR and the Channel Deepening Environmental Impact Statement (EIS)/EIR. In June 2001, opponents of the China Shipping Terminal project, as described in the WBTIP EIR, filed suit in both state and federal courts alleging that LAHD did not comply with, among other things, the National Environmental Policy Act (NEPA) or CEQA in approving a permit to construct the China Shipping Terminal or to lease the terminal to the China Shipping Company. On October 30, 2002, the State of California Second District Court of Appeals ordered a partial halt to ongoing construction and operation of Phase I of the Berth 97-109 China Shipping Container Terminal project component (the proposed Project assessed in this document) of the WBTIP EIR. The court ordered the preparation of a project-specific EIR to evaluate all three phases of the proposed Project.

Afterward, LAHD and the litigants negotiated an agreement to settle both the state and the federal proceedings. On March 6, 2003, the Superior Court of the State of California, Los Angeles District, approved a Stipulated Judgment memorializing the Settlement Agreement between the Project opponents and LAHD to settle the state case. On that same date, the United States District Court for the Central District of California approved a stipulation for compromise settlement among the Project opponents, the United States Army Corps of Engineers (USACE), and LAHD. Subsequently, the Port negotiated with the litigants to amend the Stipulated Judgment. A compromise in the form of an Amended Stipulated Judgment (ASJ) was reached in March 2004. This EIR has been prepared pursuant to the terms of the ASJ and the obligations of the Port under CEQA.

Although the China Shipping Container Terminal and Yang Ming Container Terminal share one gate complex, both the federal Settlement Agreement and the state court ASJ require the preparation of a project-specific environmental analysis of all three phases of the proposed Project alone, not as part of any larger West Basin project or other project. The federal Settlement Agreement also provided that the revised Environmental Assessment (EA) and permit prepared by USACE would remain in place until USACE reconsiders the permit terms and conditions upon completion of the EIS/EIR.

The ASJ, in consideration of additional mitigation measures and other requirements, allowed the Port to complete construction and commence operation of Phase I of the China Shipping Project. Specifically, Phase I China Shipping operations were operational while the project-specific China Shipping EIR was under preparation. Phase I China Shipping construction was completed in 2003, and operations officially began on June 21, 2004.

In addition to requiring LAHD to prepare a project-specific EIR for the proposed Project in compliance with the requirements of CEQA, the ASJ identified specific requirements to be included in the EIR. These requirements are outlined as follows.

- LAHD shall prepare a Project-specific EIR evaluating the impacts of construction and operation of the three phases of the proposed Berth 97-109 Container Terminal improvements. The EIR specifically will:
 - Evaluate all Project-specific and cumulative impacts from the proposed Project alone, and not as part of any larger West Basin project or other projects
 - Assess mitigation measures to reduce those identified impacts
 - Consider alternatives to the China Shipping Project with reduced environmental impacts, including alternative “Port-related uses” other than a shipping terminal at the China Shipping Project site and alternatives to the size, magnitude, and configuration of the proposed China Shipping Project
- Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off of Port lands) shall be evaluated.
- LAHD shall prepare and distribute a new NOP, conduct and complete a new scoping process, circulate a new Draft EIR for public and agency review, and complete and certify the EIR addressing Berth 97-109 improvements.
- The baseline condition for consideration of impacts from the China Shipping Project shall either be zero or the baseline for the Berths 97-109 prior to approval of the Lease in March 2001.
- The EIR shall contain an evaluation of impacts in the various resource categories to the Port, the surrounding communities of San Pedro and Wilmington, as well as the South Coast Air Basin. The EIR will set forth mitigation measures for any impacts that are potentially significant in the following categories.
 - Geology, seismicity, and topography
 - Groundwater, soils, and sediments
 - Meteorology and air quality
 - Toxic emissions and risk
 - Hydrology, water quality, and oceanography
 - Biota and habitats
 - Ground transportation and circulation
 - Marine vessel transportation
 - Noise
 - Public health and safety
 - Public services
 - Energy
 - Utilities
 - Land use

- Aesthetics, visual resources, and light and glare
- Recreation
- Cultural resources
- Environmental justice

Table 1 lists the corresponding EIS/EIR section that contains the applicable evaluations.

Table 1. Required Amended Stipulated Judgment Sections

Required Section	Corresponding EIS/EIR Section
Geology, Seismicity, and Topography	Section 3.5: Geology
Groundwater, Soils, and Sediments	Section 3.7: Groundwater and Soils; and Section 3.14: Water Quality, Sediments, and Oceanography
Meteorology and Air Quality	Section 3.2: Air Quality and Meteorology
Toxic Emissions and Risk	Section 3.2: Air Quality and Meteorology
Hydrology, Water Quality, and Oceanography	Section 3.14: Water Quality, Sediments, and Oceanography
Biota and Habitats	Section 3.3: Biological Resources
Ground Transportation and Circulation	Section 3.6: Ground Transportation and Circulation
Marine Vessel Transportation	Section 3.10: Marine Transportation
Noise	Section 3.11: Noise
Public Health and Safety	Section 3.8: Hazards and Hazardous Materials
Public Services	Section 3.13: Utilities and Public Services
Energy	Section 3.13: Utilities and Public Services
Utilities	Section 3.13: Utilities and Public Services
Land Uses	Section 3.9: Land Use
Aesthetics, Visual Impacts, and Light and Glare	Section 3.1: Aesthetics and Visual Resources
Recreation	Section 3.12: Recreation
Cultural Resources	Section 3.4: Cultural Resources
Environmental Justice	Chapter 5.0: Environmental Justice

Source: LAHD, 2004

- LAHD shall require, as mitigation, all topsticks and sidepicks (shoreside loading equipment) employed at the Berth 97-109 Container Terminal to use emulsified diesel fuel and diesel oxidation catalysts if these fuels are found to be technically feasible as specified in the ASJ and can be safely implemented.

- LAHD shall require, as mitigation, the terminal operator to phase-in the use of alternative-fuel tractors such that by September 30, 2004, all tractors would be alternative-fuel tractors, unless these tractors are not technically feasible in accordance with the terms of the ASJ.
- LAHD shall install two low-profile cranes at Berth 102 to be employed if Berth 102 is constructed and if feasible in accordance with the terms of the ASJ. If additional cranes are required, they also will be low-profile cranes, as feasible in accordance with the terms of the ASJ.
- LAHD shall install, as mitigation, necessary electrical infrastructure to provide shoreside power for ship hoteling (Alternative Maritime Power [AMP]) and cause the retrofitting of China Shipping marine container ships to accommodate the use of AMP while hoteling.
- LAHD shall require, as mitigation, that two China Shipping container ships be retrofitted to accept shoreside electrical power by August 2004, three ships be retrofitted for AMP by January 2005, and four ships retrofitted for AMP by March 31, 2005. In addition, LAHD shall require that 30 percent of ships docking at Berths 97-109 use shoreside electric power for hoteling from August 1, 2004, to January 1, 2005, 60 percent from January 1, 2005, through July 1, 2005, and 70 percent after July 1, 2005.
- LAHD shall evaluate the feasibility and emissions benefits of using available grades of marine fuel with 2,000 ppm or less sulfur content in commercial container vessels when in coastal waters and at berth.
- LAHD shall complete a traffic study by May 2003 and implement needed mitigation within 30 days after the study is complete. LAHD also shall prepare and implement a Traffic Mitigation Plan for San Pedro and Wilmington within 3 months of completing the ongoing Portwide traffic study.
- LAHD shall fund additional air quality and community aesthetic mitigation, totaling \$50 million (in five annual installments of \$10 million), to mitigate environmental and other effects of Port operations.

In addition, the ASJ does not prevent the Port from preparing and certifying EIRs for other projects, including, but not limited to, a proposal to develop a project that combines operation of the China Shipping Project with Berths 121-131 (Yang Ming Terminal) and a possible EIR that addresses other terminals in the West Basin and/or the West Basin as a whole, including Berths 97-109. Regardless of the preparation of any such EIR, the Port is obligated to complete and certify the China Shipping EIR in compliance with CEQA and the ASJ, and to adopt mitigation measures identified in the China Shipping EIR for the China Shipping Project. The ASJ also requires the Port to certify the China Shipping EIR prior to or at the same time that it certifies any other EIR evaluating the Berth 97-109 site as part of its proposed project. Furthermore, the ASJ states that if LAHD prepares a separate EIR for a combined China Shipping/Yang Ming Terminal, LAHD will consider the same alternatives for the use of Berths 97-109 in that EIR, and it will consider the combined terminal as an alternative in the China Shipping EIR.

Project Description

The proposed Project (shown in Figure 2-3, Figure 2-5, and Table 2-2) consists of the development and operation of a new container terminal for the China Shipping Lines at Berths 97-109. The terminal would be developed by LAHD in three phases of construction, Phase I (completed and in operation since 2004),

Phase II (estimated completion in 2011), and Phase III (estimated completion in 2012). The terminal would operate over a 40-year lease (2005 to 2045). China Shipping is operating under an existing lease, which will be reconsidered as part of the proposed Project. Phase I elements in operation are consistent with the ASJ and the federal Settlement Agreement.

Phase I elements and existing operation (2004 to 2007) are being reanalyzed in conjunction with future construction and operation of the China Shipping Terminal (Berths 97-109) (2008 to 2045) as a single, stand-alone Project, and not as part of any larger West Basin project. This approach satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that LAHD shall prepare a Project-specific EIR evaluating the impacts of construction and operation of the three phases of the proposed Berth 97-109 Container Terminal improvements, and that the EIR specifically will evaluate all Project-specific and cumulative impacts from the proposed Project alone, and not as part of any larger West Basin project or other projects. In addition, the EIR evaluates the proposed Project in comparison with an environmental baseline condition that assumes conditions prior to approval of the China Shipping Lease. This analysis also satisfies paragraph VI.A.2, providing that the baseline condition on which changes to the environment are evaluated will assume no improvements historically onsite (zero) or conditions prior to approval of the lease in March 2001. The proposed Project would operate at maximum capacity by 2030.

As part of the proposed Project, China Shipping would be granted a 40-year lease, beginning in 2005 and ending in 2045, to occupy and operate the terminal. As part of the lease, West Basin Container Terminal LLC (WBCT), a subsidiary of China Shipping Lines, would operate the terminal backlands. The lease would require that the premises be used for activities, operations, and purposes incidental to and related to the operation of a container terminal. Specifically, the lease would prohibit the tenant from any use of the premises other than those stated above without prior approval of the Port. Within the terms of the ASJ, China Shipping currently operates the terminal under a lease signed in 2005. Consistent with the ASJ, the existing lease would be modified upon certification of this EIS/EIR to require compliance with all laws and regulations, including environmental controls that are not part of the current lease. These additional environmental controls would be imposed pursuant to this EIS/EIR, the CAAP, the Port Environmental Policy, and the Port Real Estate Leasing Policy (POLA, 2007), as discussed in Section 1.6. Measures would include emissions standards for terminal equipment, participation in the vessel speed reduction program, fuel requirements, Alternative Maritime Power (AMP) for a proportion of marine vessels, clean truck requirements, and other environmental measures unrelated to air quality (such as stormwater management). WBCT would operate under the China Shipping lease as described above.

When operating at maximum capacity in 2030, the improved Berth 97-109 Container Terminal could handle approximately 1,551,000 TEUs per year, which represents an annual throughput of approximately 838,378 containers. To accommodate an annual throughput of 1,551,000 TEUs, 234 annual ship calls and associated tugboat operations (2 tugs are required each for ship docking and undocking, for a total of 4 tugs per call or 936 tugs annually), a total of up to 5,055 daily truck trips, and up to 817 annual round-trip rail movements would be required. As discussed in Section 1.1.3, these throughput numbers were determined using two forecasting models and represent the reasonably foreseeable upper limit of terminal operations. The models consider the capacities of the berth and wharf, along with cargo and vessel forecasts contained in the report *Forecast of Container Vessel Specifications and Port Calls within San Pedro Bay* (Mercator Transport Group, 2005). China Shipping might operate at lower TEU volumes than those described; however, an estimation of reasonably foreseeable throughput based on berth limitations ensures a conservative analysis in that all reasonably foreseeable Project operations are included. Additionally, ships not belonging to China Shipping (third-party invitees) occasionally might use the terminal. By estimating reasonably foreseeable throughput based on berth limitations, the potential for such third-party ship calls is considered.

Consistent with ongoing Port-area transportation studies, truck traffic through the terminal gate in 2005 was distributed as follows: 80 percent day shift (8:00 a.m. to 5:00 p.m.), 10 percent night shift (5:00 p.m. to 3:00 a.m.), and 10 percent hoot shift (3:00 a.m. to 8:00 a.m.) in 2005. The projected distribution of truck traffic through the terminal gate is expected to be: 80 percent day shift, 10 percent night shift, 10 percent hoot shift in 2015; and 60 percent day shift, 20 percent night shift, and 20 percent hoot shift in 2030. Shift splits as of 2001 showed over 90 percent of TEU throughput occurring during the day shift. The 80/10/10 split assumption was determined jointly by the Ports of Long Beach and Los Angeles staff, based on operational reports. This shift split was considered to be realistic and reasonably conservative for purposes of CEQA traffic analysis. A greater reduction in daytime throughput was assumed only in the longer term (2030) to be reasonably conservative, given expected changes in long-term port operations.

Based on the above splits, the terminal handled 403,200 TEUs in 2005, and an assumed 80 percent (322,560 TEUs) was handled during the day, 10 percent (40,320 TEUs) at night, and 10 percent (40,320 TEUs) during the hoot shift. In 2030 (at 1,551,000 TEUs), an assumed 60 percent of total volume would be handled during the day, with 20 percent at night and 20 percent during the hoot shift. As throughput grows, more gate movements would be distributed to the night and hoot shifts. Currently, infrastructure (such as the highway network) and employee levels can handle the majority of gate movements during the day hours. However, although expected future upgrades to both on- and off-Port infrastructure and additional employees will add additional capacity, the gate will become more congested during these hours, thus shifting the additional throughput to the night and hoot shifts. Most cargo will continue to move through the gate during the day because warehouses and other cargo end users are expected to operate primarily during the day.

To ensure cargo can be handled and moved through the gate at night, the Port and industry groups are exploring operational changes both at the Port and with end users. For example, PierPASS, is a new program that implements financial disincentives to the movement of containers during peak hours (3:00 a.m. to 6:00 p.m., Monday through Friday). While this project assumes 24/7 operation in the future, the terminal, rail facilities, distribution centers, warehouses, and retailers are not expected to operate at full capacity during the night and hoot shifts.

II. CEQA Findings

The Findings of Fact are based on information contained in the Recirculated Draft EIS/EIR and the Final EIR for the proposed Berth 97-109 [China Shipping] Container Terminal Project, as well as information contained within the administrative record. The administrative record includes, but is not limited to, the 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 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 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 75 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 Recirculated Draft EIS/EIR, a list of persons, organizations and public agencies commenting on the Recirculated Draft EIS/EIR, responses to comments received during the public review, and identifies changes to the Recirculated Draft EIS/EIR. This section provides a summary of the environmental effects of the project that are discussed in the Recirculated 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:

Cultural Resources

Hazards and Hazardous Materials

Land Use

Marine Transportation

Recreation

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

Aesthetics

Air Quality and Meteorology

Biological Resources

Geology

Ground Transportation

Groundwater and Soils

Noise

Utilities and Public Services

Water Quality Sediments and Oceanography

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:

Aesthetics

Air Quality and Meteorology

Biological Resources

Geology

Ground Transportation

Noise

Water Quality Sediments and Oceanography

Groundwater and Soils

Utilities and Public Services

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:

Groundwater and Soils

Utilities and Public Services

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

Aesthetics

Air Quality and Meteorology

Biological Resources

Geology

Ground Transportation

Noise

Water Quality Sediments and Oceanography

The significant and unavoidable impacts, the significant impacts that would be mitigated to a less than significant level, and the less than significant impacts identified above are presented in Tables 2.1, 2.2 and 2.3. Less than significant impacts following implementation of mitigation measures are presented in Table 2.2. Findings are provided for impacts found not to be significant, significant impacts that are mitigated to less-than-significant levels, as well as significant 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.

In addition to complying with CEQA, the above-described evaluation of Project impacts, and of mitigation and/or project alternatives that would substantially reduce or avoid Project impacts determined to be significant, satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that LAHD shall assess mitigation measures to reduce identified significant impacts of the Project and consider alternatives to the Project with reduced environmental impacts, including alternative "Port-related uses" other than a shipping terminal at the China Shipping Project site and alternatives to the size magnitude, and configuration of the proposed China Shipping Project.

Findings Regarding Environmental Impacts Significant and Unavoidable

The LAHD Board of Commissioners hereby finds that the following environmental impacts of the China Shipping Project are significant and unavoidable.

Table 2.1 Unavoidable Significant Impacts

Environmental Impacts§	Impact Determination	Mitigation Measures	Impacts after Mitigation
AESTHETICS			
AES-2: The proposed Project would affect views of the Vincent Thomas Bridge	Significant impact	MM AES-2: Use cranes that have gray surfaces. MM AES-3: Implement beautification measures. MM AES-4: Plaza park improvements	Significant impact
AIR QUALITY			
AQ-1: Construction would produce emissions that would exceed SCAQMD emission significance thresholds.	Significant impact for VOC, CO, NO _x , SO _x , PM ₁₀ /PM _{2.5} emissions in Phase I Significant impact for VOC, NO _x , SO _x , PM ₁₀ /PM _{2.5} emissions in Phases II and III	MM AQ-1: Harborcraft 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 (BMPs) 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 from VOC, CO, NO _x , SO _x , PM ₁₀ /PM _{2.5} emissions in Phase I Significant impact after mitigation from NO _x , SO _x , PM ₁₀ and PM _{2.5} emissions in Phases II and III Less than significant impact after mitigation for all other pollutants for Phases II and III

		<p>MM AQ-18: Yard Locomotives at Berth 121-131 Rail Yard</p> <p>MM AQ-19: Clean Diesel Truck Program</p> <p>MM AQ-20: LNG Trucks</p> <p>MM AQ-21: Truck Idling Reduction Measure</p> <p>MM AQ-22: Periodic Review of New Technology and Regulations</p> <p>MM AQ-23: Throughput Tracking</p> <p>MM AQ-24: General Mitigation Measure.</p>	
<p>AQ-4: Proposed Project or alternatives operations would result in offsite ambient air pollutant concentrations that exceed SCAQMD threshold of significance.</p>	<p>Significant impact for 1-hour and annual NO₂ and 24-hour PM₁₀/PM_{2.5} concentrations</p> <p>Less than significant impact for all other pollutants</p>	<p>MM AQ-9 through MM AQ-24 **</p>	<p>Significant impact after mitigation for 1-hour and annual NO₂ and 24-hour PM₁₀/PM_{2.5} concentrations</p> <p>Less than significant impact after mitigation for all other pollutants</p>
<p>AQ-7: The proposed Project or alternative would expose receptors to significant levels of toxic air contaminants (TACs).</p>	<p>Significant impact for cancer risk and acute noncancer effects</p> <p>Less than significant impact for chronic noncancer effects</p>	<p>MM AQ-9 through MM AQ-24 **</p>	<p>Significant impact for cancer risk and acute noncancer effects</p>
<p>AQ-9: The proposed Project would produce Greenhouse Gas (GHG) emissions that would exceed 2003 baseline levels.</p>	<p>Significant impact</p>	<p>MM AQ-9, AQ-10, AQ-17, AQ-20, AQ-21 **, and:</p> <p>MM AQ-25: LEED Certification</p> <p>MM AQ-26: Compact Fluorescent Light Bulbs</p> <p>MM AQ-27: Energy Audit</p> <p>MM AQ-28: Solar Panels</p> <p>MM AQ-29: Recycling</p> <p>MM AQ-30: Tree Planting</p>	<p>Significant impact after mitigation</p>

BIOLOGY			
BIO-4b/c: Operation of the proposed facilities in the West Basin has a potential to result in accidental spills or introduce non-native species into the Harbor that could disrupt local biological communities.	Significant impact	No mitigation measures beyond regulatory compliance are available	Significant impact
GEOLOGY			
GEO-1a: Seismic activity along the Palos Verdes Fault Zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure that would expose people and structures to greater than normal risk during the construction period.	Significant and unavoidable impact	No mitigation measures are available to reduce below significance	Significant and unavoidable impact
GEO-1b: Seismic activity along the Palos Verdes Fault Zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure that would expose people and structures to substantial risk during the operations period (through 2045).	Significant and unavoidable impact	No mitigation measures are available to reduce below significance	Significant and unavoidable impact
GEO-2a: Construction within the Port area will expose people and structures to substantial risk involving tsunamis or seiches. Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches within the proposed Project area and vicinity.	Significant and unavoidable impact	MM GEO-1: Emergency Response Planning	Significant and unavoidable impact
GEO-2b: Operations within the Port area will expose people and structures to substantial risk involving tsunamis or seiches. Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches within the proposed Project area and vicinity.	CEQA: Significant and unavoidable impact	MM GEO-1	CEQA: Significant and unavoidable impact

GROUND TRANSPORTATION			
TRANS-5: Proposed Project operations would cause an increase in rail activity, causing potential delays in regional traffic at the Henry Ford Avenue and Avalon Boulevard grade crossings.	Significant impact	No mitigation available	Significant and unavoidable impact
NOISE			
NOI-1: Construction activities would temporarily and periodically generate noise that exceeds the significance threshold levels at the sensitive receivers near the Project site.	Significant impact	NOI-1: a) Construction Hour limits. b) Construction Workday limits. c) Temporary Noise Barriers. d) Properly muffled and maintained equipment. e) Idling Prohibitions. f) Equipment Location requirements. g) Quiet Equipment Selection. h) Notification. i) IHC Hydrohammer for pile driving. j) Reporting Requirements.	Significant impact
NOI-3: Operations would generate noise levels that exceed significance thresholds at sensitive receivers near the Project site (Knoll Hill and Front Street).	Significant impact	NOI-2: Installation of noise walls at the Project site or affected receivers.	Significant impact
WATER QUALITY			
WQ-1e: Operation of proposed Project facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	Upland stormwater discharges: Less than significant impact In-water vessel spills, illegal discharges, and leaching: Significant impact	Mitigation not required for upland activities. Mitigation not available for spills, illegal discharges, or leaching impacts.	Upland: Less than significant impact In-water: Significant and unavoidable 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 of the China Shipping Project are less than significant after implementation of mitigation measures.

Table 1.2 Significant Impacts that can be Mitigated

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
BIOLOGICAL RESOURCES			
BIO-2a: Construction activities would result in a substantial reduction or alteration of a state-, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	Significant impact to EFH from fill placement in the West Basin; no impacts to other natural habitats, special aquatic sites, or plant communities	MM BIO-1: LAHD shall apply 1.27 credits (= 2.54 Inner Harbor acres) available in the Bolsa Chica or Outer Harbor mitigation banks to compensate for loss of fish and wildlife habitat due to construction of fill in the West Basin.	No impact
BIO-4a: Dredging, filling, and wharf construction activities would substantially disrupt local biological communities.	Significant impact	MM BIO-1 (1.27 Outer Harbor credits) BIO-3: Noise Reduction During Pile Driving	Less than significant impact
BIO-5: Filling in the West Basin would result in a permanent loss of marine habitat.	Significant impact	MM BIO-1 (1.27 Outer Harbor credits)	No impact
GROUND TRANSPORTATION			
TRANS-2: Long-term vehicular traffic associated with the proposed Project would significantly impact more than one study intersection's volume capacity ratios or level of service.	Significant impact	MM TRANS-1: Additional turn lanes at Avalon Boulevard and Harry Bridges Boulevard. MM TRANS-2: Additional through lane at Alameda and Anaheim Streets MM TRANS-3: Additional lanes and reconfiguration at John S. Gibson and I-110 Ramps MM TRANS-4: Additional lanes at Fries Avenue and Harry Bridges Boulevard.	Less than significant impact

		<p>MM TRANS-5: Additional lanes at Broad Avenue and Harry Bridges Boulevard.</p> <p>MM TRANS-6: Additional lanes at Seaside and Navy Way.</p>	
GROUNDWATER AND SOILS			
<p>GW-1a: Construction activities may 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.</p>	Significant impact	<p>MM GW-1: Site Remediation</p>	<p>CEQA: Less than significant impact</p>
		<p>MM GW-2: Contamination Contingency Plan</p>	
UTILITIES AND PUBLIC SERVICES			
<p>PS-4: The proposed Project could generate solid waste that would exceed the capacity of existing facilities in the proposed Project area in the long term.</p>	<p>Water Supply and Wastewater Treatment Capacity: Less than significant impact</p> <p>Solid Waste: Significant after 2030 and from demolition debris</p>	<p>MM PS-1: Recycling of construction materials</p> <p>MM PS-2: Using materials with recycling content</p> <p>MM PS-3: Would ensure long-term adequate solid waste management starting from 2025.</p>	<p>CEQA: Less than significant impact</p>

Findings Regarding Environmental Impacts Found to Be Less-Than-Significant

The LAHD Board of Commissioners hereby finds that the following environmental impacts of the China Shipping 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

Environmental Impacts§	Impact Determination	Mitigation Measures	Impacts after Mitigation
AESTHETICS			
AES-1: The Proposed Project would not have a demonstrable negative aesthetic effect	Less than significant impact	Mitigation not required; however, MM AES-1 would further reduce any potential for impact. MM AES-1: Landscape along Front Street and implement Northwest Harbor Beautification	Less than significant impact
AES-3: The Proposed Project would not create negative shadows on sensitive uses	No impact	Mitigation not required	No impact
AES-4: The Proposed Project would not create substantial negative light and glare	Less than significant impact	Mitigation not required	Less than significant impact
AES-5: The Proposed Project would not result in changes to the overall visual character of the landscape but would change the visual quality of some views in a way that could have a significant adverse effect on viewer response.	Less than significant impact	Mitigation not required	Less than significant impact
AIR QUALITY			
AQ-5: The proposed Project or alternative would not generate on-road traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards	Less than Significant, as CO standards would not be exceeded.	Mitigation not required	Less than Significant, as CO standards would not be exceeded.
AQ-6: The proposed Project or alternative would not create an objectionable odor at the nearest sensitive receptor	Less than Significant odor impacts	Mitigation not required	Less than Significant odor impacts

<p>AQ-8: The proposed Project or alternative would not conflict with or obstruct implementation of an applicable AQMP.</p>	<p>Less than significant impact for AQMP consistency</p>	<p>Mitigation not required</p>	<p>Less than significant impact for AQMP consistency</p>
BIOLOGICAL RESOURCES			
<p>BIO-1a: Construction activities would not 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.</p>	<p>Less than significant impact</p>	<p>Mitigation not required</p>	<p>Less than significant impact</p>
<p>BIO-3a: Construction activities would not interfere with wildlife movement/migration corridors.</p>	<p>No impact</p>	<p>Mitigation not required</p>	<p>No impact</p>
<p>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.</p>	<p>Less than significant impact</p>	<p>Mitigation not required; however, MM BIO-2 would further reduce any potential for impact. MM BIO-2: All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area starting 2009</p>	<p>Less than significant impact</p>
<p>BIO-3b: Operation of proposed Project facilities would not interfere with wildlife movement/migration corridors.</p>	<p>No impact</p>	<p>Mitigation not required</p>	<p>No impact</p>
CULTURAL RESOURCES			
<p>CR-1: Construction of the proposed Project or Alternatives 2, 3, 4, 6, and 7 has an extremely low potential to disturb, damage, or degrade unknown archaeological and ethnographic cultural resources (Phase I construction, applied to Alternative 1, occurred and did not encounter any archaeological resources).</p>	<p>Less than significant impact</p>	<p>Mitigation not required; however, MM CR-1 would further reduce any potential for impact. MM CR-1: In the unlikely event that any artifact, or culturally deposited bone, shell or non-native stone is encountered during construction, work shall be immediately stopped and relocated to another area. The contractor shall stop construction within 10 meters (30 feet) of the exposure of</p>	<p>Less than significant impact</p>

		these finds until a qualified archaeologist can be retained by the Port to evaluate the find using NRHP and CRHR eligibility criteria (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 and CEQA Guidelines.	
CR-2: Construction of the proposed Project would not impact any potentially significant historic architectural resources.	No impact	Mitigation not required.	No impact.
CR-3: Construction of the proposed Project would not result in disturbance, damage, or degradation to paleontological resources.	Less than significant impact	Mitigation not required.	Less than significant impact mitigation.
GEOLOGICAL RESOURCES			
GEO-3a/b: Project construction/operation 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 impact	Mitigation not required	Less than significant impact
GEO-4a/b: Project construction/operation would not result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury from soil expansion.	Less than significant impact	Mitigation not required	Less than significant impact
GEO-5a/b: Project construction/operation 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-6a: Shallow groundwater, which would cause unstable collapsible soils, may be encountered during excavation, but would not expose people or structures to substantial risk.	Less than significant impact	Mitigation not required	Less than significant impact

GEO-6b: Collapsible soils would have less than significant impact on proposed Project operations and would not expose people or structures to substantial risk.	No impact	Mitigation not required	No impact
GEO-7a/b: Project construction/operation would not result in one or more distinct and prominent geologic or topographic features being destroyed, permanently covered, or materially and adversely modified.	No impact	Mitigation not required	No impact
GEO-8a/b: Project construction/operation 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
GROUND TRANSPORTATION			
TRANS-1: Construction would result in a short-term, temporary increase in truck and auto traffic.	Less than significant impact	No mitigation required	Less than significant impact
TRANS-3: An increase in onsite employees due to proposed Project operations would result in a less than significant increase in related public transit use.	Less than significant impact	Mitigation not required	Less than significant impact
TRANS-4: Proposed Project operations would result in a less than significant increase in freeway congestion.	Less than significant impact	Mitigation not required	Less than significant impact
GROUNDWATER AND SOILS			
GW-2a: Proposed Project construction would potentially result in expansion of the area affected by contaminants.	Less than significant	Mitigation not required	Less than significant
GW-3a: Proposed Project construction would not result in a change to potable water levels	No impact	Mitigation not required	No impact
GW-4a: Proposed Project construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	No impact	Mitigation not required	No impact
GW-5a: Proposed Project Proposed Project construction would not result in violation of regulatory water quality	No impact	Mitigation not required	No impact

standards at an existing production well.			
GW-1b: Proposed Project operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to personnel.	Less than significant	Mitigation not required	Less than significant
GW-2b: Proposed Project operations would not result in expansion of the area affected by contaminants.	Less than significant	Mitigation not required	Less than significant
GW-3b: Proposed Project operations would not result in a change to potable water levels.	No impact	Mitigation not required	No impact
GW-4b: Proposed Project operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	No impact	Mitigation not required	No impact
GW-5b: Proposed Project would not result in violation of regulatory water quality standards at an existing production well.	No impact	Mitigation not required	No impact
HAZARDS			
RISK-1 a/b: Construction/demolition and operational 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 impact	Mitigation not required	Less than significant impact
RISK-2 a/b: Construction/demolition and operational activities would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-3 a/b: Construction/demolition and operational activities would not substantially interfere with an existing emergency response or evacuation plan, thereby	Less than significant impact	Mitigation not required	Less than significant impact

increasing risk of injury or death.			
RISK-4 a/b: The proposed Project would comply with applicable regulations and policies guiding development within the Port.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-5a: Tsunami-induced flooding and seismic events would result in fuel releases from Construction/demolition equipment or hazardous substances releases from containers, which in turn would result in risks to persons and/or the environment.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-5b: Tsunami-induced flooding and seismic events would result in fuel releases from ships or hazardous substances releases from containers, which in turn would result in risks to persons and/or the environment.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-6a/b: A potential terrorist attack would result in adverse consequences to areas near the proposed Project site during the construction period/operations.	Less than significant impact	Mitigation not required	Less than significant impact
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 impact	Mitigation not required	Less than significant impact
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 impact	Mitigation not required	Less than significant impact
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 impact	Mitigation not required	Less than significant impact
LU-4: The proposed Project would not divide or isolate existing neighborhoods, communities, or land uses.	Less than significant impact	Mitigation not required	Less than significant impact

LU-5: The proposed Project would not cause a secondary impact to surrounding land uses.	Less than significant impact	Mitigation not required	Less than significant impact
MARINE TRANSPORTATION			
VT-1a: Proposed Project construction-related marine traffic would not interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin, or Precautionary Area.	Less than significant impact	Mitigation not required	Less than significant impact
VT-1b: Proposed Project operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin, or Precautionary Area.	Less than significant impact	Mitigation not required	Less than significant impact
NOISE			
NOI-2: No construction activities would occur during prohibited hours.	No impact	Mitigation not required	No impact
RECREATION			
REC-1: The proposed Project would not result in a demand for recreation and park services that exceeds the available resources.	Less than significant impact	Mitigation not required	Less than significant impact
REC-2: The proposed Project would not result in a substantial loss or diminished quality of recreational, educational, visitor-oriented opportunities, facilities, or resources.	Less than significant impact	Mitigation not required	Less than significant impact
UTILITIES AND PUBLIC SERVICES			
PS-1: The proposed Project or Alternatives 1-6 would not increase the demand for additional law enforcement officers and/or facilities that would require additional facilities	Less than significant impact	Mitigation not required	Less than significant impact
PS-2: The proposed Project or Alternatives 1 through 6 would not require additional staffing or fire station-related equipment to	Less than significant impact	Mitigation not required	Less than significant impact

maintain levels of service.			
PS-3: The proposed Project would not result in substantial offsite utility infrastructure; however, construction and/or expansion of onsite water, wastewater, or storm drain lines will be installed to support new terminal development.	Less than significant	Mitigation not required	Less than significant
PS-5: Implementation of the proposed Project would generate minor increases in energy demands; however, construction of new offsite energy supply facilities and distribution infrastructure would not be required to support proposed Project activities.	Less than significant	Mitigation not required	Less than significant
WATER QUALITY			
WQ-1a: Wharf construction activities 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 impact	Mitigation not required	Less than significant impact
WQ-1b: Runoff from backland development 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 impact	Mitigation not required	Less than significant impact
WQ-1c: Fill, and wharf development, in the West Basin 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 impact	Mitigation not required	Less than significant impact
WQ-1d: 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 impact	Mitigation not required	Less than significant impact

DRAFT FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS
Document considered draft until Board considers document

WQ-2a: Proposed Project construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	Less than significant impact	Mitigation not required	Less than significant impact
WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	Less than significant impact	Mitigation not required	Less than significant impact
WQ-4a: Construction activities have the potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled onsite.	Less than significant impact	Mitigation not required	Less than significant impact
WQ-2b: Operation of proposed Project facilities would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	Less than significant impact	Mitigation not required	Less than significant impact
WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	Less than significant impact	Mitigation not required	Less than significant impact
WQ-4b: Operations have a low potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled onsite.	Less than significant impact	Mitigation not required	Less than significant impact

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

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

Groundwater and Soils

Utilities and Public Services

In addition, some, but not all, of the significant impacts of the proposed Project in the following resource areas could be reduced to less-than-significant levels through the implementation of appropriate mitigation measures. However, other significant impacts of the proposed Project in these resource areas cannot be reduced to a less-than-significant level through implementation of feasible mitigation measures, and therefore remain significant unavoidable impacts of the proposed Project.

Biological Resources

Ground Transportation

All or some of the potential impacts of the proposed Project in the following resource areas were found to be less-than-significant levels prior to mitigation. However, mitigation was identified for all or some of the less-than-significant impacts in the following areas, to further ensure impacts remained less than significant.

Aesthetics

Biological Resources

Cultural Resources

The Board hereby finds that mitigation measures have been identified in the EIS/EIR that will avoid or substantially lessen the following significant environmental impacts to a less than significant level. The significant impacts and the mitigation measures that will reduce them to a less than significant level are as follows.

Groundwater and Soils

As discussed in Section 3.7 of the EIS/EIR, there would be one significant impact to Groundwater and Soils resources 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 GW-1a: Construction activities may 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.

Construction of the proposed Project could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of proposed Project components could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Such exposure also could occur from the extension of the wharf at Berth 100, relocation of the Catalina Express terminal docks, demolition of the Catalina Express Terminal building, and backland construction onto the Catalina Express Terminal. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact under CEQA.

Human health and safety impacts would be significant pursuant to exposure levels established by the California Environmental Protection Agency (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA).

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR. These changes are set forth in Mitigation Measures GW-1 below:

GW-1: Site Remediation.

Unless otherwise authorized by the lead regulatory agency for any given site, the LAHD shall remediate all encountered contaminated soils or contamination within the excavation zones on the Project site boundaries prior to or during subsurface construction activities. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the Los Angeles Fire Department, DTSC, and/or RWQCB.

Soil remediation shall be completed such that contamination levels in subsurface excavations are below health screening levels established by OEHHA and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Only clean soil would be used as backfill. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) in backland areas and/or risk-based soil assessments but would be subject to the discretion of the lead regulatory agency. Excavated contaminated soil shall not be placed in another location onsite; it must be properly disposed offsite. All imported soil to be used as backfill in excavated areas should be sampled to ensure that the soil is free of contamination.

Existing groundwater contamination throughout the proposed Project boundary shall continue to be monitored and remediated as encountered, simultaneous and/or subsequent to site development, and/or in accordance with direction provided by the RWQCB.

Unless otherwise authorized by the lead regulatory agency for any given site, areas of excavation with soil contamination that shall be remediated prior to, or in conjunction with, Project construction.

GW-2: Contamination Contingency Plan.

The following contingency plan shall be implemented to address previously unknown contamination 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. Deeply discolored soil or suspected contaminated soil shall be segregated from light colored soil. In the event unexpected suspected chemically impacted material (soil or water) is encountered during construction, the contractor shall notify the Los Angeles Harbor Department's Chief Harbor Engineer, Director of Environmental Management, and Risk Management's Industrial Hygienist. The Port shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material(s) identified within the boundaries of the construction area. Continued work at a contaminated site shall require the approval of the Chief Harbor Engineer.*
- b) A photoionization detector (or other similar devices) shall be present during grading and excavation of suspected chemically impacted soil.*
- c) Excavation of VOC-contaminated soil will require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.*
- d) The remedial option(s) selected shall be dependent upon a number 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 offsite and onsite remedial options shall be evaluated.*
- e) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the chemically impacted area(s) within the boundaries of the excavation area shall be remediated to the satisfaction of the lead regulatory agency for the site. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.*
- f) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of Project completion.*
- g) In the event that contaminated soil is encountered, all onsite personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place.*
- h) In cases where potential chemically impacted soil is encountered, a real-time aerosol monitor shall be placed on the prevailing downwind side of the impacted soil area to monitor for airborne particulate emissions during soil excavation and handling activities.*
- i) All excavations shall be filled with structurally suitable fill material which is free from contamination.*

Rationale for Finding

Soil and groundwater remediation of known contaminated areas, as outlined in MM GW-1, as well as implementation of a contingency plan for potentially encountering unknown soil contamination, as outlined in MM GW-2, would reduce health and safety impacts to onsite personnel in backland areas, as well as construction personnel, such that residual impacts would be less than significant.

Utilities and Public Services

As discussed in Section 3.13 of the EIS/EIR, there would be one significant impact to Groundwater and Soils resources that would be mitigated to less than significant levels as a result of mitigation measures required in, or incorporated into, the Project. The impacts and 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.

The proposed Project would result in less than significant demands for water and wastewater supplies that would be accommodated by LADWP, onsite water supply sewer infrastructure, and existing TITP capacity. The 2005 UWMP includes Project water demand and shows that water supply will meet overall LADWP demand (including the Project) in 2030. Maximum Project water demand will be reached in 2030 within the UWMP timeframe. Water is expected to be continued to be supplied to the Project after 2030 under future water planning and updated UWMPs (which are required every 5 years) because the Project demand would be treated as existing demand in future water supply planning.

Wastewater from Project construction would constitute 0.015 percent of the TITP daily flow. Project operations would constitute 0.017 percent of the TITP daily capacity and exceed the CEQA baseline levels. However, because the TITP currently operates at 54 percent capacity, these increases would be considered negligible. The amount of wastewater generated by the Project would not significantly affect existing or future capacity at TITP due to the limited operational Project flows and the substantial remaining capacity at TITP beyond 2020, as described above. Therefore, impacts associated with exceeding the capacity of the existing water supply and the TITP wastewater treatment facility would be less than significant.

Container terminal operations would consist primarily of container loading and storage activities that would not generate substantial amounts of solid waste requiring disposal in a landfill. The proposed Project would generate 52.8 tons of solid waste per year, or 48.7 tons above the CEQA baseline level of 4.1 tons per year. This would represent an increase in the contribution to the permitted throughput at Chiquita Canyon Landfill from 0.0002 percent under CEQA baseline conditions to 0.0029 percent under proposed Project operations. The contribution to the permitted throughput at the Sunshine Canyon Landfill would increase from 0.0002 percent to 0.0026 percent, and the contribution to the permitted daily capacity at the El Sobrante Landfill would increase from 0.0002 percent (under CEQA baseline conditions) to 0.0024 percent. The landfills would be able to accommodate the negligible increase in solid waste generated by Project operations through their respective closure dates, estimated to be approximately 2030. Solid waste generated from Project operations after closure of the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill (2030 and after) would represent a significant impact to landfill capacity. However, if additional adequate landfill capacity is permitted and made available, if more distant landfill capacity is utilized

for solid waste generated in the City, and/or if the achievement of Zero-Waste solutions in the City occurs over an extended time period, then the solid waste generated by the Project likely would not represent a significant impact to landfill capacity.

A substantial amount of debris during construction is not anticipated to be generated because, with the exception of the Catalina Express Building, demolition is not required (the site was largely vacant under CEQA baseline conditions), and because construction debris is generally reused or recycled where economically feasible. Nonetheless, because construction and demolition debris is one of the greatest individual contributors to reductions in solid waste capacity, impacts associated with solid waste generation from the demolition of the Catalina Express Terminal are assumed to be significant under CEQA.

Although hazardous materials could be encountered and require disposal during construction activities, several contaminated soil treatment and disposal options and Class I landfills are available for offsite disposal, providing adequate capacity. Because of this, impacts related to exceeding the capacity of a Class I landfill would be less than significant. In addition, there could be asbestos-containing material in the existing Catalina Express Terminal and/or Princess Pavilion buildings that would have to be abated prior to demolition or renovation. However, the amount of asbestos-containing material that might have to be disposed of would not be substantial due to the limited sizes of the Catalina Express Terminal building (approximately 120 feet by 200 feet) and the Princess Pavilion building (11,600 square feet). Consequently, significant impacts to hazardous materials landfill capacity would not occur.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR. These changes are set forth in Mitigation Measures PS-1, PS-2 and PS-3 below:

MM PS-1: Recycling of Construction Materials.

Demolition and/or excess construction materials shall be separated onsite for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials shall be provided onsite.

MM PS-2: Materials with Recycled Content.

Materials with recycled content shall be used in Project construction where feasible. Chippers onsite during construction shall be used to further reduce excess wood for landscaping cover.

MM PS-3: Solid Waste Integrated Resources Plan

To ensure adequate long-term solid waste management, the proposed Project will be required to comply with policies and standards set forth in the City's Solid Waste Integrated Resources Plan (SWIRP) following 2025.

Rationale for Finding

Impacts to water supply and wastewater treatment capacity would be less than significant. Impacts to solid waste capacity would be less than significant through approximately 2030 when existing landfills are projected to close. **MM PS-3** would ensure long-term adequate solid waste management for the proposed Project starting from 2025. Long-term impacts to solid waste disposal would be less than significant after mitigation.

Biological Resources

As discussed in Section 3.3 of the EIS/EIR, there would be three significant impacts to Biological Resources 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 BIO-2a: Construction activities would result in a substantial reduction or alteration of a state-, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands

Dike, fill, and pile placement in the southern West Basin would result in a permanent loss of approximately 2.54 acres of Inner Harbor marine habitat and a reduction of essential fish habitat (EFH) in the West Basin, a significant impact under CEQA. Dredging and wharf construction activities would cause temporary disturbances, but no substantial alteration, to habitat for FMP species, and therefore the impacts of dredging and wharf construction would be less than significant. Although upland areas would be expanded compared to CEQA baseline conditions, construction activities on the backlands, including the bridges over the Southwest Slip, would have no direct impacts on EFH or other natural habitats because none are present in the vicinity of the Project site and because bridge construction would take place on land. Indirect impacts through runoff of sediments during storm events would be less than significant because such runoff would be controlled as described for water quality in Section 3.14 (e.g., a project-specific Stormwater Pollution Protection Plan (SWPPP) with best management practices (BMPs) such as sediment barriers and sedimentation basins). No impacts to Significant Environmental Areas (SEAs), kelp beds, eelgrass beds, wetlands, or mudflats would occur because none of these habitats are present at or near the proposed Project site.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect of dike, fill and pile placement identified in the Final EIR. This mitigation measure would fully offset proposed Project impacts to EFH, sustainable fisheries, and loss of general marine habitat. Tables 3.1 and 3.2 illustrate how the mitigation credits will be used and shows the overall credit availability for the Port. These changes are set forth in **MM BIO-1** below:

MM BIO-1: Mitigation Credits

The LAHD shall apply 1.27 credits (= 2.54 Inner Harbor Acres) available in the Bolsa Chica or Outer Harbor mitigation banks to compensate for loss of fish and wildlife habitat due to construction of fill in the West Basin. Credit accounting and debiting of credits from either the

Bolsa Chica or Outer Harbor mitigation banks shall occur prior to issuance of a Section 10/404 Permit by the USACE.

Rationale for Finding

Mitigation Measure BIO-1 would completely mitigate the significant loss of Inner Harbor habitat for aquatic species by replacement through mitigation agreements/banks. With implementation of **MM BIO-1**, residual impacts as a result of proposed Project construction activities would be less than significant.

Table 3.1 Mitigation Available for Proposed Berth 97-109 Project

Mitigation Bank	Approximate Credits Available	Value in Deep Outer Harbor ^a	Value in Shallow Outer Harbor ^b	Slips ^c
Bolsa Chica Bank	106	106	71	212
Outer Harbor Bank	49	49	33	98
Inner Harbor Bank ^d	6.2	n.a.	n.a.	6
Total	161	155	104	316

Notes:

^a 1.0 credit is equal to 1 acre of fill in deep Outer Harbor.

^b 1.5 credits are equal to 1 acre of fill in shallow Outer Harbor.

^c 0.5 credit is equal to 1 acre of fill in Inner Harbor.

^d Inner Harbor Bank credits can only be used to mitigate Inner Harbor habitat loss.

Table 3.2. Estimated Credits for Committed and Upcoming Port Projects

Projects Committed Credits ^a	Credits
Berths 136-147 (TraPac)	-4.75
Pier 300A	-71.5
Cabrillo SWH Expansion A	+27.0
Cabrillo Phase II	+1.7
Subtotal	-42.80
Upcoming Projects ^b	
Berths 243-245 (Southwest Marine)	-4.0
NW Slip – 5-acre Fill	-2.5
Cabrillo SWH Expansion B	+22.5
Berths 121-131 (Yang Ming)	-14.0
Berths 136-147 (TraPac)	-4.75
San Pedro Waterfront	+4.4
Subtotal	-1.65
Total	-41.15
^a Estimated number of credits required, relative to deep Outer Harbor credits.	
^b Not including Berths 97-109 (proposed Project)	

Impact BIO-4a: Dredging, filling, and wharf construction activities would not substantially disrupt local biological communities

Construction activities on the backlands would extend beyond the CEQA baseline area but would result in no substantial disruption of local biological communities for the reasons described above; therefore, impacts would be less than significant (however, as described below, a mitigation measure

has been added to further reduce any potential for noise impacts during pile driving). However, the loss of approximately 2.54 acres of soft-bottom habitat in the West Basin would represent a significant impact to the benthic community. Runoff of pollutants from backland construction activities would not substantially disrupt biological communities in the West Basin and would have only localized, short-term, less than significant impacts on marine organisms in the immediate vicinity of drain outlets. This is due to implementation of runoff control measures that are part of the proposed Project (e.g., a project-specific SWPPP and BMPs such as sediment barriers and sedimentation basins; see Section 3.14.4.3 for a list of measures). Accidental spills from equipment during dredging would not substantially disrupt local biological communities because they would be small, contained, cleaned up immediately, and affect only a few common marine organisms, and thus would have localized, less than significant impacts. Accidental spills during construction on land would not reach Harbor waters due to the implementation of BMPs, and thus would have no impacts on marine communities. No notice to proceed will be issued without approval of the specific SWPPP and BMPs

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 EFH, sustainable fisheries, and loss of general marine habitat. Tables 3.1 and 3.2 illustrate how the mitigation credits will be used and shows the overall credit availability for the Port. These changes are set forth in **MM BIO-1** below:

MM BIO-1: Mitigation Credits

The LAHD shall apply 1.27 credits (= 2.54 Inner Harbor Acres) available in the Bolsa Chica or Outer Harbor mitigation banks to compensate for loss of fish and wildlife habitat due to construction of fill in the West Basin. Credit accounting and debiting of credits from either the Bolsa Chica or Outer Harbor mitigation banks shall occur prior to issuance of a Section 10/404 Permit by the USACE.

In addition, in response to a comment received from the National Marine Fisheries Service (NMFS) the following mitigation measure was included in the Final EIR. The mitigation measure further reduces any potential noise impacts to marine mammals during construction. The mitigation measure does not reduce impacts associated with loss of soft-bottom habitat.

MM BIO-3: Noise Reduction during Pile Driving

The contractor shall be required to use sound abatement techniques to reduce both noise and vibrations from pile driving activities. Sound abatement techniques shall include, but are not limited to, vibration or hydraulic insertion techniques, drilled or augured holes for cast-in-place piles, bubble curtain technology, and sound aprons where feasible. At the initiation of each pile driving event, and after breaks of more than 15 minutes the pile driving shall also employ a “soft-start” in which the hammer is operated at less than full capacity (i.e., approximately 40–60% energy levels) with no less than a 1-minute interval between each strike for a 5-minute period.

In addition, a qualified biologist hired by the Port shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port’s

Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 100 meters of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance.

Rationale for Finding

With implementation of **MM BIO-1 and BIO-3**, residual impacts as a result of proposed Project construction activities would be less than significant.

Impact BIO-5: Fill Placement in the West Basin would result in a permanent loss of marine habitat.

Project construction would occur beyond the CEQA baseline area into the West Basin, and the placement of dike, fill, and piles near Berths 100 and 102 would cause a permanent loss of 2.54 acres of aquatic habitat in the Los Angeles Inner Harbor (southern West Basin). This impact is considered significant under CEQA. Dike, fill, and pile placement in the West Basin occurred in Phase I and would occur in Phase III (2010-2012). Pile placement would occur during Phase II and Phase III for wharf construction and relocation of the dock (to Berth 95) for the Catalina Express Terminal. Placement of dike and fill would cause a loss of aquatic habitat, including water column and soft bottom. The beneficial uses associated with that habitat would also be lost. The dike, fill, and pile placement in the water adjacent to the berths would result in a net loss of approximately 2.54 acres.

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 loss of general marine habitat. Tables 3.1 and 3.2 illustrate how the mitigation credits will be used and shows the overall credit availability for the Port. These changes are set forth in **MM BIO-1** below:

BIO-1: Mitigation Credits

The LAHD shall apply 1.27 credits (= 2.54 Inner Harbor Acres) available in the Bolsa Chica or Outer Harbor mitigation banks to compensate for loss of fish and wildlife habitat due to construction of fill in the West Basin. Credit accounting and debiting of credits from either the Bolsa Chica or Outer Harbor mitigation banks shall occur prior to issuance of a Section 10/404 Permit by the USACE.

Rationale for Finding

Mitigation Measure BIO-1 would completely mitigate the significant loss of Inner Harbor habitat for aquatic species by replacement through mitigation agreements/banks. With implementation of **MM BIO-1**, residual impacts as a result of proposed Project construction activities would be less than significant.

Ground Transportation

As discussed in Section 3.6 of the 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 would significantly impact six study intersection volume/capacity ratios, or level of service.

Based on the results of the traffic study as presented in Tables 3.6-4, 3.6-5, 3.6-6, and 3.6-7 and more fully set forth in Appendix F, the proposed Project would result in significant circulation system impacts at six study intersections, relative to baseline conditions without the proposed Project.

Specifically, the LOS at the Avalon Boulevard/Harry Bridges Boulevard intersection would experience a significant traffic impact during the p.m. peak hour in 2015, 2030, and 2045. Avalon Boulevard/Harry Bridges Boulevard would operate at LOS C during the p.m. peak hour in 2015 and 2030, and LOS D during the p.m. peak hour in 2045. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Alameda Street/Anaheim Street intersection would experience a significant traffic impact during the a.m. peak hour for 2015, and during both the a.m. and p.m. peak hours for 2030 and 2045. At 2015, Alameda Street/Anaheim Street would operate at LOS D for the a.m. peak hour. At 2030, Alameda Street/Anaheim Street would operate at LOS E for both the a.m. and p.m. peak hours. At 2045, Alameda Street/Anaheim Street would operate at LOS F for both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact. The John S. Gibson Boulevard/I-110 NB ramps intersection would experience significant project-related traffic during the p.m. peak hour for 2015, and during both the a.m. and p.m. peak hours for 2030 and 2045. At 2015, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS C during the a.m. peak hour. At 2030, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS C during both the a.m. and p.m. peak hours. At 2045, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS D during both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Fries Avenue/Harry Bridges Boulevard intersection would experience a significant traffic impact during both the a.m. and p.m. peak hours for 2015, 2030, and 2045. At 2015, Fries Avenue/Harry Bridges Boulevard would operate at LOS D for both the a.m. and p.m. peak hours. At 2030, Fries Avenue/Harry Bridges Boulevard would operate at LOS E for the a.m. peak hour, and LOS D for the p.m. peak hour. At 2045, Fries Avenue/Harry Bridges Boulevard would operate at LOS F for both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Broad Avenue/Harry Bridges Boulevard intersection would experience a significant traffic impact during the p.m. peak hour for 2015 and 2045. At 2015, Broad Avenue/Harry Bridges Boulevard would operate at LOS C during the p.m. peak hour. At 2045, Broad Avenue/Harry Bridges Boulevard would operate at LOS D during the p.m. peak hour. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Navy Way/Seaside Avenue intersection would experience a significant traffic impact during the p.m. peak hour for 2030 and 2045. At 2030, Navy Way/Seaside Avenue would operate at LOS E during the p.m. peak hour. At 2045, Navy Way/Seaside Avenue would operate at LOS F during the p.m. peak hour. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact. Therefore, the proposed Project would result in a significant traffic impact under CEQA.

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. Tables 2.1 and 2.2 illustrates how the mitigation credits will be used and shows the overall credit availability for the Port. These changes are set forth in **MM TRANS-1 through MM TRANS-6** below:

MM TRANS-1: Avalon Boulevard and Harry Bridges Boulevard

Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015.

MM TRANS-2: Alameda Street and Anaheim Street

Provide an additional eastbound through-lane on Anaheim Street. This measure shall be implemented by 2015.

MM TRANS-3: John S. Gibson Boulevard and I-110 NB Ramps

Provide an additional southbound and westbound right-turn lane on John S. Gibson Boulevard and I-110 NB ramps. Reconfigure the eastbound approach to one eastbound through-left-turn lane, and one eastbound through-right-turn lane. Provide an additional westbound right-turn lane with westbound right-turn overlap phasing. This measure shall be implemented by 2015.

MM TRANS-4: Fries Avenue and Harry Bridges Boulevard

Provide an additional westbound through-lane on Harry Bridges Boulevard. Provide an additional northbound, eastbound, and westbound right-turn lane on Fries Avenue and Harry Bridges Boulevard. This measure shall be implemented by 2015.

MM TRANS-5: Broad Avenue and Harry Bridges Boulevard

Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015.

MM TRANS-6: Navy Way and Seaside Avenue

Provide an additional eastbound through-lane on Seaside Avenue. Reconfigure the westbound approach to one left-turn lane and three through-lanes. This measure shall be implemented by 2030.

Rationale for Finding

Mitigation Measures **TRANS-1 through MM TRANS-6** would completely mitigate the significant traffic impacts. With implementation of **MM TRANS-1 through MM TRANS-6** residual impacts as a result of proposed Project operational activities would be less than significant. Because **Mitigation Measures TRANS-1 through TRANS-6** are largely striping projects that include minimal construction, implementation of **Mitigation Measures TRANS-1 through TRANS-6** will not result in significant secondary impacts. Additionally, striping work would be completed during off-peak hours to minimize impacts to traffic.

Less Than Significant Environmental Impacts that Remain Less-Than-Significant Level by Mitigation Measures Required in or Incorporated into the Project

All impacts in the following resource areas were found to be less than significant prior to mitigation. However, mitigation was identified for some or all less-than-significant impacts in these areas, to further reduce the potential for impacts to the environment.

Aesthetics

As discussed in Section 3.1 of the EIS/EIR, there would be one mitigation measure applied to the proposed Project to a less than significant impact to Aesthetics. The mitigation measure is discussed below.

Proposed Project – Impact AES-1: Would the proposed Project have a demonstrable negative aesthetic effect?

The proposed Project would not remove or demolish any features that substantially contribute to the valued visual character of the area. The proposed Project would not require grading or development of any area of designated open space.

The proposed Project cranes and backland facilities would be consistent with the existing features of the Port landscape region, and would not contrast with the valued landscape features of the area. From several viewpoints, the presence of the cranes has the potential to interfere with views toward the Vincent Thomas Bridge, a valued landscape feature, and compete with it in the view. This impact is evaluated under Significance Criterion AES-2 below.

As described in the analysis of the changes in views by viewing area presented in Section 3.1.4.3.3.1, although the proposed Project would probably not be thought of as contributing to the aesthetic values of the area, for the most part, it would not substantially detract from them, either. The proposed Project would be visually consistent with the development in the surrounding areas of the Port, and its main effect would be to contribute to an intensification of the level of development in the area. This effect would not constitute a significant impact. Although the proposed Project would not result in significant impacts to the visual features along the roadways around the terminal, the Port has begun to landscape roadway areas for new development projects in an effort to “green” the Port, and MM AES-1 would define this landscaping around the terminal to further enhance its aesthetics. MM AES-1 provides for landscaping around the terminal boundary and gateways into the Port.

This analysis satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the less-than-significant environmental effect identified in the Final EIR in the form of the MM AES-1 below:

MM AES-1

1. *Reconfigure the fence line bordering Front Street to create a 5-foot-wide planting strip alongside the edge of the street to be planted with low shrubs and some trees. Plant species used for this landscaping must be selected for their attractiveness, their relationship to existing planting themes in the surrounding area, and their environmental values. The plants installed must be of an adequate size to create an attractive planting composition within 5 years. Plants shall be monitored over the entire time frame of the lease. If any plants die, they must be replaced.*
2. *Implement the recommendations of the Northwest Harbor Beautification Plan as applicable and allowed under the State Tidelands Trust Guidelines. The recommendations include landscaping two gateways to the Port: the area adjacent to the Channel Street on- and off-ramps from I-110 and SR-47, and the Harbor Boulevard on- and off-ramps from SR-47 Freeway. Planting shall be designed to promote erosion control along all hillsides.*

Rationale for Finding

With implementation of measure MM AES-1, the impact would remain less than significant.

Biological Resources

As discussed in Section 3.3 of the EIS/EIR, there would be one mitigation measure applied to the proposed Project to a less than significant impact to Biological Resources. The mitigation measure is discussed below.

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.

Terminal activity under the proposed Project would be greater than the CEQA baseline; however, operational activities would result in no loss of habitat for rare, threatened, endangered, protected, or candidate species, or Species of Special Concern. No impacts to critical habitat would occur because no critical habitat is present.

Increased ship calls, however, may affect some species. Underwater sound from proposed Project-related vessels would affect few, if any, marine mammals; impacts, therefore, would be less than significant under CEQA.

Container ships transiting the coastal waters of Southern California could potentially cause harm to endangered, threatened, or species of concern, such as marine mammals and sea turtles, from vessel collisions. Impacts of project-related vessel traffic on marine mammals would be considered less than significant because of the low probability of vessel strikes and proposed Project vessel strikes would not be expected to occur. As discussed above, fewer than three vessel strikes with whales are reported on average per year for the California coast. Very few ship strikes involving pinnipeds have been reported over the past 28 years by the Santa Barbara Marine Mammal Center (1976 to 2004). No sea turtle-ship strikes have been reported in the area, although an olive ridley sea turtle stranded in Santa Barbara in 2003 showed signs of blunt force trauma consistent with a vessel strike (Santa

Barbara Marine Mammal Center 1976–2004). No collisions have been reported between any oil tankers and any cetaceans or sea turtles in the region (Cordaro, 2002), although an oil supply vessel struck and presumably killed an adult male northern elephant seal in the Santa Barbara Channel in June 1999 (Minerals Management Service, 2001).

Although the likelihood of such a collision is low, such collisions occur and may cause an impact to species listed on the ESA, especially blue whales. Therefore, although considered less than significant because of the low probability of vessel strikes, any increase in vessel traffic caused by the project may incrementally increase the potential for whale strikes.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the less-than-significant environmental effect identified in the Final EIR. Although the likelihood of a collision between a vessel and marine mammals is very low, the MM BIO-2 would further reduce potential impacts:

MM BIO-2: Vessel Speed Reduction Program.

All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule: 100 percent starting 2009.

Rationale for Finding

With implementation of **MM BIO-2**, residual impacts as a result of proposed Project operational activities would be less than significant.

Cultural Resources

As discussed in Section 3.4 of the EIS/EIR, there would be one mitigation measure applied to the proposed Project to a less than significant impact to Cultural Resources. The mitigation measure is discussed below.

Impact CR-1: Construction of the proposed Project has an extremely low potential to disturb, damage, or degrade unknown archaeological and ethnographic cultural resources.

No archaeological or ethnographic resources eligible for listing in the NRHP, the CRHR, or otherwise considered to be a historical resource or a unique or important archaeological or ethnographic resource under CEQA are recorded within the proposed Project site. The upland and adjacent channel have been previously disturbed or are located on imported fill soils, such that the probability of encountering any intact, unknown cultural resources is remote. Therefore, the proposed Project would not reasonably be expected to disturb, damage, or degrade unknown, intact, potentially significant archaeological, or ethnographic resources. Based on the above analysis, proposed construction activities would result in less than significant impacts on known archaeological and ethnographic resources under CEQA because no archaeological or ethnographic resources have

been identified in the Project area and the impact on unknown resources is remote, given the high degree of previous disturbance to native soils and presence of imported fill in the Project area

Finding

Although the potential for impacts on unknown archaeological cultural resources is low, the following mitigation measure 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 Mitigation Measures CR-1 below:

MM CR-1:

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 and relocated to another area. 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)). Examples of such cultural materials might include concentrations of ground 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. If the resources are found to be significant, they shall be avoided or shall be mitigated consistent with SHPO 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 Gabrielino/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, MM 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 be less than significant.

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

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

Aesthetics

Air Quality and Meteorology

Biological Resources

Geology

Ground Transportation

Noise

Water Quality Sediments and Oceanography

Attachment 1 contains a list of comments received on the Recirculated Draft EIS/EIR that contain suggested mitigation measures and/or alternatives suggested to reduce significant and unavoidable impacts. The discussion below refers to Attachment 1 and indicates whether the proposed mitigation measure and/or alternative has been added to the Final 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.

Aesthetics

As discussed in Section 3.1 of the DEIR, there would be unavoidable significant impacts to Aesthetics related to operation as a result of the proposed Project³. The impacts and mitigation measures are discussed below.

Impact AES-2: The proposed Project would affect a recognized or valued view, scenic vista, or scenic highway

As described in the analysis of the changes in views by viewing area presented in Section 3.1.4.3.3.1, the proposed Project would not, for the most part, have a substantial or significant effect on the character and quality of views in the Project area. Two areas, however, have recognized or valued views that would be significantly affected by the proposed Project.

³ Impact AES-5 was also found significant and unavoidable in the Recirculated Draft EIS/EIR. However, AES-5 is a NEPA-only impact, and not an impact for CEQA consideration.

In views from the Main Channel and the recreational and commercial areas along its western banks, the presence of the proposed Project would detract from views toward the Vincent Thomas Bridge. As indicated by a comparison of the baseline view and with the visual simulation of the proposed Project in the same view, cranes would be visible in the area behind the western span of the bridge and would tend to visually merge with the bridge, substantially detracting from the clarity of its form, and diminishing its role as the gateway landmark of the Port. This would be considered a significant impact.

In views from Channel Street and other nearby hillside residential areas, review of the simulation indicate that the presence of the 10 cranes in proximity to the bridge would compete visually with the bridge and would diminish the role of the bridge as the focal point of the view. In addition, for the very large number of residential viewers and travelers on Channel Street who see this view, the presence of the 10 large cranes would substantially diminish the open panorama that existed during the baseline period, which is considered a significant impact.

This analysis satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated.

Finding

The EIS/EIR discussed impacts to Aesthetics that would result due to the cranes associated with the proposed project (Impact AES-1). Implementation of the below mitigation measures would reduce visual impacts due to the 10 cranes. 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, the impact remains significant and unavoidable as the only way to fully mitigate the impact would be to remove the cranes. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

MM AES-2 Crane Color Study:

Use a neutral gray color for the cranes that to make them visually distinct from the Vincent Thomas Bridge, reduce their contrast with the sky backdrop, and reduce their visual prominence and apparent mass. This color should be specified for use as the factory-applied color for the additional cranes proposed for installation at the Project site and for repainting the four cranes that now exist at the site.

MM AES-3 Beautification Plans

To offset the reduction in the quality of views from the upper portions of the Channel Street corridor, implement beautification plan improvements along the portion of John S. Gibson Boulevard and Pacific Avenue at the intersection of Channel Street. These improvements, which will include landscaping and creation of view areas of the Port, walkways, and bike paths, should be designed with the objectives of upgrading the visual quality of the eastern end of the Pacific Avenue corridor and creating an attractive gateway to the Port that links with the system of amenities the Port is developing along the western edge of Port lands. One of the key improvements proposed is removal of a large billboard and deteriorated building on the east side of Pacific Avenue adjacent to the China Shipping site and close to the intersection with Channel

Street. Removal of the billboard and building will improve the visual quality of this area and will provide space for installation of landscaping and visitor amenities.

Additionally, the utility poles along this segment will be removed and all utility lines will be placed underground if feasible. Placement of utility lines underground will be subject to cost feasibility. If costs exceed \$1,000 per linear foot, the Port will reassess placement of utility lines underground and propose alternative measures, such as additional landscaping and/or reduced numbers of underground utility placements. The Port also will begin voluntary negotiations to remove and possibly relocate a truck resale facility on the northeast corner of the Pacific Avenue and Front Street intersection. If removed, the vacated area would be landscaped with vegetation consistent with the Pacific Avenue Corridor Improvements.

MM AES-4: Plaza Park

To offset the reduction in the quality of views from the area along the Main Channel, implement plans to improve the role of Plaza Park as a place to enjoy views of the Port and of the Vincent Thomas Bridge. Because of the angle of the view, the views from the park toward the bridge will not be substantially affected by the presence of the cranes that are a part of the Project. To improve the connection between the Main Channel area and Plaza Park, a system of safe, attractive, pedestrian paths and stairways should be developed. This system should include signs, arrows, and other design elements that direct visitors up to the park to take advantage of the opportunities that it provides to view the Port. Improvements in the park itself should include new walkways and railings; a Harbor overview seating area; a Port and bridge overlook area with interpretive signage and improved view corridors; a visitor center; and upgraded landscaping, lighting, and other improvements to make the park a safe and attractive place from which Port and bridge views could be appreciated.

Rationale for Finding

With use of a gray color for the cranes as proposed in MM AES-2, there is a potential to bring about a small reduction in the proposed Project impacts on the Main Channel and Channel Street views. However, the proposed Project residual impacts on these views would remain significant and unavoidable. With implementation of MM AES-3, aesthetic and amenity improvements at the lower end of Channel Street and the immediately adjacent area of Pacific Avenue would partially offset the Project effects on the quality of the views seen from the roadway and residences located at the upper end of the Channel Street corridor. This mitigation measure, however, would not reduce the impacts on views from the upper Channel Street corridor to a level that is less than significant. With implementation of MM AES-4, the enhanced opportunities for viewing the Port and the Vincent Thomas Bridge from Plaza Park would partially offset the Project effects on the quality of the views toward the Vincent Thomas Bridge seen from the Main Channel and the area alongside it. This mitigation measure, however, would not reduce the impacts on views from the Main Channel and surrounding area to a level that is less than significant.

One additional mitigation measure that was thought to have potential to reduce aesthetic and visual impacts associated with the impacts of cranes is the use of low-profile cranes in lieu of standard A-frame cranes.⁴ However, based on extensive study and analysis by POLA staff and consultants over

⁴Articulated boom cranes were considered as potential mitigation, but withdrawn because they are similar in height as standard A-frame cranes when in an operational configuration and would not be as effective as low-profile cranes in reducing the height of the cranes.

a multi-year period, the Port has concluded that use of low-profile cranes is both infeasible and ineffective as mitigation for the significant CEQA or NEPA aesthetic impacts of the Project.

The Engineering Division of the Port began conducting extensive analysis of low-profile cranes in 2003. The Port engaged Liftech Consultants, Inc., the leading expert in the field of container crane engineering, which has participated in the design of nearly all the low-profile cranes in the world. Port staff and Liftech developed and submitted to crane manufacturers throughout the world a Request for Proposals (RFP), which included technical specifications for low-profile cranes. After determining that the two proposals submitted in response to that RFP were infeasible (primarily for exceeding allowable wharf loadings and due to concerns about crane stability during wind and seismic conditions), Port staff and Liftech investigated revised designs for low-profile cranes, including subsequent issuance of four revised specifications.

Additionally, in July 2005, the Port sent a team of its engineers and representatives from the International Longshore and Warehouse Union (ILWU) to the Port of Boston to examine and operate the low-profile cranes installed there because of crane height restrictions due to aircraft clearance requirements. (There are some low-profile cranes operating in ports adjacent to airports; however, those cranes are not designed for current seismic standards, and low-profile cranes have never been used to mitigate aesthetic impacts or preserve views.) During the visit to Boston, Port staff and ILWU representatives raised safety and operational concerns about the low-profile cranes. Liftech also concluded that the cost of low-profile cranes adequate for the operational and seismic conditions at the Port would greatly exceed the cost of conventional low-profile cranes (memorandum from Arun K. Bhimani to Port of Los Angeles, January 2008). On February 15, 2006, the Board of Harbor Commissioners adopted a new policy against use of low-profile cranes at the Port, including detailed findings that low-profile cranes have safety, design, operational, cost and productivity deficiencies that make them infeasible for use at the Port, and that low-profile cranes are ineffective in mitigating the visual impacts of A-frame cranes (Board of Harbor Commissioners Resolution No. 6411, dated February 15, 2006; Staff Report re: proposed Resolution No. 6411, dated February 8, 2006, and attachments thereto). Notwithstanding the Port's new policy, the Port sent out a sixth RFP based on revised specifications in March 2006, but did not receive any bids in response. Finally, Port staff ran simulations which show that the aesthetic impacts of using low-profile cranes for the China Shipping Project were either not improved or were slightly greater, compared to conventional A-frame cranes, because the greater mass of the structural members of the low-profile cranes would give them a more pronounced presence in the view. Therefore, Port staff has determined that the use of low-profile cranes in lieu of A-frame cranes is neither feasible from a safety, design, operational, cost or productivity standpoint, nor would low-profile cranes be effective in mitigating the aesthetic impacts of A-frame cranes proposed for the Project. (*Low Profile Cranes for the Berth 97-109 [China Shipping] Container Terminal Project*, Feasibility Memo, March 2008.) For these reasons, use of low-profile cranes is not further evaluated as mitigation for the CEQA or NEPA impacts of the A-frame cranes proposed for this Project.

Public Comment:

A number of comments were received in regards to Impact AES-1, namely from the Northwest San Pedro Neighborhood Council (NWSP, comments 23-16 and 23-18), and Carrie Scoville (comments 46-58, 46-59, 46-60 and 46-61) (Attachment 1). The NWSPNC requested completing of Phase II of the NWSP North Gaffey Plan, and undergrounding utility poles. Ms. Scoville requested a series of community mitigation programs including finishing the sidewalk at Pacific Avenue and Front Street, and working with the Community Redevelopment Agency (CRA) on a Pacific Avenue Mural.

In regards to the comments received by the NWSPNC, many of the requests are already included in MMAES-3, including implementing the NWSP Beautification Plan. In regards to undergrounding utility poles, as stated in MM AES-3, the existing utility poles along the portion of John S. Gibson Boulevard and Pacific Avenue at the intersection of Channel Street will be removed and all utility lines will be placed underground if feasible. Placement of utility lines underground will be subject to cost feasibility. If costs exceed \$1,000 per linear foot, the Port will reassess placement of utility lines underground and propose alternative measures, such as additional landscaping and/or reduced numbers of underground utility placements. The comment requests undergrounding all utility lines along Front Street and John S. Gibson Street (roadways that extend beyond the boundaries of the Berth 97-109 Terminal), on the alleged grounds that the proposed Project would increase the number of utility poles and cross arms. The proposed Project would utilize electrical power provided by LADWP via three industrial stations on the project site, as discussed in Section 3.13.2.2.5 of the Recirculated Draft EIS/EIR. These stations connect with existing power lines maintained by LADWP. Contrary to the comment, the proposed Project would not increase the number of utility poles or cross arms, and the project would not result in an aesthetic impact that could be mitigated by placing all of the electrical lines along Front Street and John S. Gibson underground. Regarding the recommendation to place landscaping along the perimeter of the site, please see mitigation measure MM AES-3, which provides for beautification improvements along a portion of John S. Gibson Boulevard and Pacific Avenue (at the intersection of Channel Street), including landscaping. Regarding the recommendation that the NWSPNC China Shipping mitigation project be undertaken as part of the first phase of terminal construction, it is the understanding of the Port that the referenced mitigation project includes many improvements to areas in which a nexus has not been established in the Recirculated Draft EIS/EIR. It should be noted that MM AES-3 includes some of the recommendations in the referenced mitigation plan, namely landscaping along John S. Gibson Boulevard and portions of Pacific Avenue. No changes are required to the Final EIR as a result of the comments by the NWSPNC on Impact AES-2.

In regards to Ms. Scoville's comments, the Port will forward the recommendations to the Board of Harbor Commissioners through the Final EIR. However, the recommendations would not reduce aesthetic impacts due to the 10 cranes to below significant because the only way to fully mitigate the impacts would be to remove the cranes all together. In regards to the sidewalk recommendation, the Port is not the lead agency for the sidewalks improvements project. However, the Port will coordinate with the City of Los Angeles Department of Transportation to understand its plans for sidewalk improvements at this location and assist if necessary. The recommendation for the mural program might best be directed to the Community Redevelopment Agency (CRA) because the proposed Project would not result in impacts that could be mitigated by the referenced program. No changes are required to the Final EIR as a result of Ms. Scoville's comments on AES-2.

Air Quality

As discussed in Section 3.2 of the DEIR, there would be six unavoidable significant impacts to air quality and meteorology 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 a SCAQMD threshold of significance.

Without mitigation, the proposed Project would exceed the daily construction emission thresholds for VOC, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} during construction of Phase I, and would exceed the thresholds for VOC, NO_x, SO_x, PM₁₀, and PM_{2.5} during construction of Phases II and III as shown in Table 3.1. Therefore, significant impacts under CEQA would occur.

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 these measures would substantially lessen emissions from criteria pollutants associated with construction of the proposed Project, as listed in Table 3.2, 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, emissions of VOC, CO, NO_x, PM₁₀, and PM_{2.5} during Phase I construction and of NO_x, PM₁₀, and PM_{2.5} during Phases II and III construction would remain significant under CEQA. In the Final EIR, AQ-5 and AQ-6 were amended to further reduce construction emissions. Incorporation of these 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, however, as explained below.

MM AQ-1 Harbor Craft used during construction

Phase I: All diesel-powered derrick barges used for pile driving shall use emulsified diesel fuel.

Phases II and III: All harbor craft used during the construction phase of the project shall be, at a minimum, repowered to meet the cleanest existing marine engine emission standards or USEPA Tier 2. Additionally, where available, harbor craft shall meet the proposed USEPA Tier 3 (which are proposed to be phased-in beginning 2009) or cleaner marine engine emission standards.

The above harbor craft measure shall be met unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- *A piece of specialized equipment is unavailable in a controlled form 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 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.*

MM AQ-2: Cargo Ships

Phases II and III: All cargo ships used for terminal crane deliveries shall comply with the expanded VSRP of 12 knots from 40 nm from Point Fermin to the Precautionary Area.

MM AQ-3: Fleet Modernization for On-Road Trucks

Phases II and III:

1. Trucks hauling materials such as debris or fill shall be fully covered while operating off Port property.
2. Idling shall be restricted to a maximum of 5 minutes when not in use.
3. USEPA Standards:

All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used onsite or to transport materials to and from the site shall comply with EPA 2004 on-road PM emission standards and be the cleanest available NOX (0.10 grams per brake horsepower-hour [g/bhp-hr] PM10 and 2.0 g/bhp-hr NO X). In addition, all on-road trucks shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions-control device used by the contractor shall achieve emissions reductions no less than what could be achieved by a Level 3 diesel emissions control strategy for a similar-sized engine as defined by CARB regulations.

A copy of each unit's certified, USEPA rating, BACT documentation, and each unit's CARB or SCAQMD operating permit, shall be provided at the time of mobilization of each applicable unit of equipment.

The above USEPA Standards measures shall be met, unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- *A piece of specialized equipment is unavailable in a controlled form 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 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.*

MM AQ-4: Fleet Modernization for Construction Equipment

Phases II and III:

1. Construction equipment shall incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards.
2. Idling shall be restricted to a maximum of 5 minutes when not in use.
3. Tier Specifications:

- a. January 1, 2009, to December 31, 2011: All off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions-control device used by the Contractor shall achieve emissions reductions no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similar-sized engine as defined by CARB regulations.
- b. Post January 1, 2012: All off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions-control device used by the Contractor shall achieve emissions reductions no less than what could be achieved by a Level 2 or Level 3 diesel emissions-control strategy for a similar-sized engine as defined by CARB regulations.

A copy of each unit's certified Tier specification, BACT documentation and each unit's CARB or SCAQMD operating permit, shall be provided at the time of mobilization of each applicable unit of equipment.

The above "Tier Specifications" measures shall be met, unless one of the following circumstances exists, and the contractor is able to provide proof that any of these circumstances exists:

- A piece of specialized equipment is unavailable in a controlled form 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 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.

MM AQ-5: Best Management Practices

Phases II and III:

The following types of measures are required on construction equipment (including on-road trucks):

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.*

LAHD shall implement a process by which to select additional BMPs to further reduce air emissions during construction. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list.

MM AQ-6: Additional Fugitive Dust Controls

The calculation of fugitive dust (PM₁₀) from Project earth-moving activities assumes a 75 percent reduction from uncontrolled levels to simulate rigorous watering of the site and use of other measures (listed below) to ensure Project compliance with SCAQMD Rule 403.

The construction contractor shall further reduce fugitive dust emissions to 90 percent from uncontrolled levels. The construction contractor shall designate personnel to monitor the dust control program and to order increased watering, as necessary, to ensure a 90 percent control level. Their duties shall include holiday and weekend periods when work may not be in progress.

The following measures, at minimum, must be part of the contractor Rule 403 dust control plan:

- *Active grading sites shall be watered one additional time per day beyond that required by Rule 403.*
- *Contractors shall apply approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas) inactive for ten days or more.*
- *Construction contractors shall provide temporary wind fencing around sites being graded or cleared.*
- *Trucks hauling dirt, sand, or gravel shall be covered in accordance with Section 23114 of the California Vehicle Code.*
- *Construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site*
- *The grading contractor shall suspend all soil disturbance activities when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas shall be stabilized if construction is delayed.*
- *Pave road and road shoulders.*
- *Require the use of clean-fueled sweepers pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to the site to reduce fugitive dust emissions.*
- *Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM₁₀ generation.*
- *Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.*

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.

MM AQ-7: General Mitigation Measure.

For any of the above mitigation measures (MM AQ-1 through 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.

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 AQ-1 through AQ-8, which lessen significant construction emissions. Although reduced as a result of the mitigation measures, construction emissions remain significant and unavoidable. Tables 4.1 and 4.2 present the construction emissions and thresholds before and after mitigation.

Table 4.1: Construction Emissions (prior to mitigation) (*bold numbers denote significant emissions*)

Emission Source	Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Phase I						
Peak Daily Phase I – CEQA Impact¹	129	594	2,082	1,460	407	202
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Phase II						
Peak Daily – Phase II	88	287	1,657	1,453	222	148
Peak Daily Emissions– Phase III	85	259	1,872	1,453	250	161
Peak Daily – Phases II and III Combined – CEQA Impact^a	88	287	1,872	1,453	250	161
Thresholds	75	550	100	150	150	50
CEQA Significant?	Yes	No	Yes	Yes	Yes	Yes

Notes:

- a) Maximum daily emissions of VOC and CO from Phases II and III combined represent the sum of the emissions from the following activities assumed to occur on the same day: Construction of Berth 102 (Phase II), Construction of Berth 100-109 Buildings (Phase II), Construct 18 of 45-Acre Backlands Improvements at Berth 100 (Phase II), Crane Delivery and Installation (Phase II), and Worker Trips (Phase II).

Table 4.2: Mitigated Construction Emissions (bold numbers denote significant emissions)

Emission Source	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
	Daily Emissions (lb/day)					
Phase I						
Peak Daily – Phase I – CEQA Impact^f	129	594	2,082	1,460	407	202
Thresholds	75	550	100	150	150	55
CEQA Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Net Mitigation Effectiveness	0%	0%	0%	0%	0%	0%
Phase II and III						
Peak Daily – Phase II	66	237	1,318	1,209	155	111
Peak Daily – Phase III	67	232	1,454	1,209	175	124
Peak Daily – Phases II and III Combined – CEQA Impact^a	67	237	1,454	1,209	175	124
Thresholds	75	550	100	150	150	55
CEQA Significant?	No	No	Yes	Yes	Yes	Yes
Net Mitigation Effectiveness	24%	18%	22%	17%	30%	23%

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} in Phase I and NO_x, PM₁₀, and PM_{2.5} (as a reminder, Phase I construction has already occurred and although some mitigation was applied, no additional mitigation is possible). Mitigation measures AQ-1 through 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 Recirculated 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 FEIR 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 Recirculated Draft EIS/EIR.

Public Comment

In response to comment 46-12 on the Recirculated Draft EIS/EIR, changes were made to Mitigation Measure AQ-6 to further reduce construction emissions impacts to the greatest feasible extent. In addition, MM AQ-5 was changed to include additional BMPs. These changes to MM AQ-5 and MM

AQ-6 will further reduce construction emissions beyond the mitigation levels identified in the Recirculated Draft EIS/EIR. In regards to addition restrictions for the cargo ships used during construction, as shown in Tables E1.1-7g and E1.1-8c in the construction emission calculations in Appendix E1 of the Recirculated Draft EIS/EIR, two general cargo ships would deliver shoreside cranes during Phase II of construction, and one general cargo ship would deliver a shoreside crane during Phase III of construction. Given that there would be only three ship visits, it is not feasible to require low-sulfur fuel, best available control technology (BACT), or shoreside power for construction-related ships due to the technical upgrades needed to comply with such restrictions.

Based on the above discussions, no changes to the Final EIR are warranted based on the comments.

Construction Schedule

As part of the USEPA's comments (1-24), the Agency recommended extending the construction duration to reduce overall construction-related impacts. It is more economical and less disruptive to construct the entire terminal as a single event early in the useful life of the terminal, which would minimize conflicts between construction and operations. Once a terminal is operational, throughput increases over time, and delaying some phases of terminal construction to the future could cause greater impacts due to conflicts between more intensive operations and new construction. Additionally, stopping terminal construction for extended periods and then restarting is not economical due to multiple mobilizations of equipment and resources, related air emissions, and conflicts with business operations on surrounding properties. As a consequence, delaying construction phases to a future date would likely result in increased overall construction durations, compared to the proposed Project. Furthermore, it is likely that the population will increase in the surrounding area over time, and delays in construction phases could actually result in impacts to a greater number of receptors (and minority and low-income populations) than if construction occurs earlier. Therefore, the Port will not amend the construction schedule as recommended.

Post-project Validation System

Comments from the NWSPNC (23-10) call for the Port to establish a post-project validation system to further identify mitigation measures and technology to reduce emissions. The Port will encourage use of cleaner construction equipment, including the cleanest available harbor craft, through the Environmental Compliance Plan required of all contractors. Each contractor is required to submit an Environmental Compliance Plan for work completed as part of the Berth 97-109 Container Terminal Project. The Environmental Compliance Plan will be developed by the contractor and must:

- Identify the overall construction area
- Identify work hours and days
- Describe the overall construction scope of work
- Identify all construction equipment to be used to complete the project
- Identify all applicable mitigation measures depending on scope of work and construction equipment list
- Develop a plan to adhere to all applicable mitigation measures
- Develop a record-keeping system to track mitigation and any pertinent permits and/or verification documents, such as equipment specifications, equipment logs, and receipts

- Develop a tracking system to ensure mitigation is completed within the specified plan
- Identify one lead person, plus one backup person to be responsible for environmental compliance
- Identify additional measures, practices or project elements to further reduce environmental impacts
- The Environmental Compliance Plan must be submitted to the Port of Los Angeles for review prior to commencing construction. The Port of Los Angeles reserves the right to modify the Plan, in conjunction with the contractor, to identify additional measures, practices or project elements to further reduce environmental impacts.

In addition, the Port, through the CAAP, has established the TAP to fund new technology to reduce air emission. The TAP is funded primarily by both Ports with additional funding from participating agencies. Therefore, a separate post-project validation system is not warranted.

Impact AQ-2: Project construction would result in offsite ambient air pollutant concentrations that exceed a SCAQMD threshold of significance

Dispersion modeling of onsite Project construction emissions was performed to assess the impact of the proposed Project on local ambient air concentrations. Table 5.1 presents the maximum offsite ground level concentrations of NO₂, CO, PM₁₀, and PM_{2.5} from construction of Phases II and III without mitigation. Unmitigated Phase I concentrations were not modeled because mitigation was implemented during Phase I. Table 5.2 shows that the maximum offsite 24-hour PM₁₀ and PM_{2.5} concentration increments and the maximum 1-hour and 8-hour CO concentrations would not exceed the SCAQMD thresholds. The maximum offsite 1-hour NO₂ concentration of 353 µg/m³, including background, would exceed the SCAQMD significance threshold during Phase I construction.

Finding

Implementation of Mitigation Measures AQ-1 through AQ-8 would reduce ambient pollutant impacts from Phase 1 construction. Implementation of these measures would substantially lessen emissions from criteria pollutants associated with construction of the proposed Project, as listed in Table 5.2 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 were significant during Phase I construction, for 1-hour NO₂ and 24-hour PM₁₀. The residual air quality impacts during Phases II and III of construction would be less than significant. As a result, Project residual impacts would remain significant for 1-hour NO₂ and 24-hour PM₁₀ for Phase I under CEQA. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

MM AQ-1 Harbor Craft used during construction

Phase I: All diesel-powered derrick barges used for pile driving shall use emulsified diesel fuel.

Phases II and III: All harbor craft used during the construction phase of the project shall be, at a minimum, repowered to meet the cleanest existing marine engine emission standards or USEPA Tier 2. Additionally, where available, harbor craft shall meet the proposed USEPA Tier 3 (which are proposed to be phased-in beginning 2009) or cleaner marine engine emission standards.

The above harbor craft measure shall be met unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- *A piece of specialized equipment is unavailable in a controlled form 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 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.*

MM AQ-2: Cargo Ships

Phases II and III: All cargo ships used for terminal crane deliveries shall comply with the expanded VSRP of 12 knots from 40 nm from Point Fermin to the Precautionary Area.

MM AQ-3: Fleet Modernization for On-Road Trucks

Phases II and III:

1. *Trucks hauling materials such as debris or fill shall be fully covered while operating off Port property.*
2. *Idling shall be restricted to a maximum of 5 minutes when not in use.*
3. *USEPA Standards:*

All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used onsite or to transport materials to and from the site shall comply with EPA 2004 on-road PM emission standards and be the cleanest available NOX (0.10 grams per brake horsepower-hour [g/bhp-hr] PM10 and 2.0 g/bhp-hr NO X). In addition, all on-road trucks shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions-control device used by the contractor shall achieve emissions reductions no less than what could be achieved by a Level 3 diesel emissions control strategy for a similar-sized engine as defined by CARB regulations.

A copy of each unit's certified, USEPA rating, BACT documentation, and each unit's CARB or SCAQMD operating permit, shall be provided at the time of mobilization of each applicable unit of equipment.

The above USEPA Standards measures shall be met, unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- *A piece of specialized equipment is unavailable in a controlled form 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 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.*

MM AQ-4: Fleet Modernization for Construction Equipment

Phases II and III:

1. *Construction equipment shall incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards.*
2. *Idling shall be restricted to a maximum of 5 minutes when not in use.*
3. *Tier Specifications:*
 - a) *January 1, 2009, to December 31, 2011: All off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions-control device used by the Contractor shall achieve emissions reductions no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similar-sized engine as defined by CARB regulations.*
 - b) *Post January 1, 2012: All off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions-control device used by the Contractor shall achieve emissions reductions no less than what could be achieved by a Level 2 or Level 3 diesel emissions-control strategy for a similar-sized engine as defined by CARB regulations.*

A copy of each unit's certified Tier specification, BACT documentation and each unit's CARB or SCAQMD operating permit, shall be provided at the time of mobilization of each applicable unit of equipment.

The above "Tier Specifications" measures shall be met, unless one of the following circumstances exist, and the contractor is able to provide proof that any of these circumstances exists:

- *A piece of specialized equipment is unavailable in a controlled form 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 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.*

MM AQ-5: Best Management Practices

Phases II and III:

The following types of measures are required on construction equipment (including on-road trucks):

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.*

LAHD shall implement a process by which to select additional BMPs to further reduce air emissions during construction. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list.

MM AQ-6: Additional Fugitive Dust Controls

The calculation of fugitive dust (PM10) from Project earth-moving activities assumes a 75 percent reduction from uncontrolled levels to simulate rigorous watering of the site and use of other measures (listed below) to ensure Project compliance with SCAQMD Rule 403.

The construction contractor shall further reduce fugitive dust emissions to 90 percent from uncontrolled levels. The construction contractor shall designate personnel to monitor the dust control program and to order increased watering, as necessary, to ensure a 90 percent control level. Their duties shall include holiday and weekend periods when work may not be in progress.

The following measures, at minimum, must be part of the contractor Rule 403 dust control plan:

- *Active grading sites shall be watered one additional time per day beyond that required by Rule 403.*
- *Contractors shall apply approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas) inactive for ten days or more.*
- *Construction contractors shall provide temporary wind fencing around sites being graded or cleared.*
- *Trucks hauling dirt, sand, or gravel shall be covered in accordance with Section 23114 of the California Vehicle Code.*
- *Construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site*
- *The grading contractor shall suspend all soil disturbance activities when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas shall be stabilized if construction is delayed.*
- *Pave road and road shoulders.*
- *Require the use of clean-fueled sweepers pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to the site to reduce fugitive dust emissions.*
- *Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM₁₀ generation.*
- *Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.*
- *Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.*
- *Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.*

MM AQ-7: General Mitigation Measure.

For any of the above mitigation measures (MM AQ-1 through 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.

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 AQ-1 through AQ-8 which substantially lessen significant construction emissions, as shown in Table 5.2. Although reduced as a result of the mitigation measures, construction emissions remain significant and unavoidable during Phase I (as a reminder, Phase I construction has already occurred).

Table 5.1. Maximum Offsite Ambient Concentrations – Proposed Project Construction without Mitigation

Pollutant	Averaging Time	Background Concentration (µg/m ³)	Maximum Concentration of Phases II and III (without Background) (µg/m ³)	Total Ground- Level Concentration of Phases II and III (µg/m ³)	SCAQMD Threshold ^a (µg/m ³)
NO ₂	1-hour	263	89.5	353	338
CO	1-hour	4,809	40.5	4,850	23,000
	8-hour	4,008	9.08	4,017	10,000
PM ₁₀	24-hour	-	4.4	-	10.4
PM _{2.5}	24-hour	-	1.3	-	10.4

a) Exceedances of the thresholds are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the concentrations without background are compared to the thresholds. The thresholds for NO₂ and CO are absolute thresholds; therefore, the total concentrations (with background) are compared to the thresholds. NO₂ thresholds represent the 2007 adopted CAAQS values.
 b) Phase I concentrations were not modeled without mitigation because mitigation was implemented during Phase I.
 c) Because Phases II and III have overlapping construction schedules, the modeling results for Phases II and III are based on the maximum combined emissions from these two phases for those construction activities with overlapping schedules.
 d) Construction schedules are assumed to be 10 hours per day for all construction equipments and vehicles. Ships hoteling are assumed to be 24 hours per day.

Table 5.2. Maximum Offsite Ambient Concentrations – Proposed Project Construction with Mitigation

Pollutant	Averaging Time	Background Concentration (µg/m ³)	Maximum Concentration of Phase I (without background) (µg/m ³)	Total Ground Level Concentration of Phase I (µg/m ³)	Maximum Concentration of Phases II and III (without background) (µg/m ³)	Total Ground Level Concentration of Phases II and III (µg/m ³)	SCAQMD Threshold ^a (µg/m ³)
NO ₂	1-hour	263	117.7	381	70.5	333	338
CO	1-hour	4,809	62.9	4,872	39.1	4,848	23,000
	8-hour	4,008	14.2	4,022	8.8	4,017	10,000
PM ₁₀	24-hour	-	12.0	-	1.7	-	10.4
PM _{2.5}	24-hour	-	3.2	-	0.79	-	10.4

a) Exceedances of the thresholds are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the concentrations without background are compared to the thresholds. The thresholds for NO₂ and CO are absolute thresholds; therefore, the total concentrations (with background) are compared to the thresholds. NO₂ thresholds represent the 2007 adopted CAAQS values.
 b) Because Phases II and III have overlapping construction schedules, the modeling results for Phases II and III are based on the maximum combined emissions from these two phases for those construction activities with overlapping schedules.
 c) Construction schedules are assumed to be 10 hours per day for all construction equipments and vehicles. Ships hoteling are assumed to be 24 hours per day.

While the mitigation measures presented in the EIS/EIR reduce emissions, emissions would still exceed SCAQMD one-hour for 1-hour NO₂ and 24-hour PM₁₀, during Phase I construction. As Phase I construction has already occurred, no additional mitigation is feasible.

Public Comment

No specific public comments were received in regards to impact AQ-2. However, the responses to comments received on impact AQ-2 above would also pertain to AQ-2, and likewise establish that no further mitigation is feasible. Please see discussion under impact AQ-1 above. In addition, as

discussed above because Phase I construction has already occurred, no additional mitigation is feasible.

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

The proposed Project would result in operational emissions that exceed 10 tons per year of VOCs and SCAQMD thresholds of significance. 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 agency-adopted requirements to meet lower emissions standards.

As discussed in the EIS/EIS, the net change in peak daily operational emissions between the unmitigated proposed Project and CEQA Baseline would exceed the SCAQMD daily thresholds for all years and for all thresholds both prior to and after mitigation. These exceedances of the SCAQMD emission thresholds represent significant levels of emissions produced during the operation of the proposed Project under CEQA.

Finding

Mitigation measures AQ-9 through AQ-24 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 5, 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 CEQA significant thresholds for all pollutants. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

MM AQ-9: Alternative Maritime Power (AMP).

China Shipping ships calling at Berths 97-109 must use AMP at the following percentages while hoteling in the Port:

- *January 1 to June 30, 2005: 60 percent of total ship calls (ASJ Requirement)*
- *July 1, 2005: 70 percent of total ship calls (ASJ Requirement)*
- *January 1, 2010: 90 percent of ship calls*
- *January 1, 2011, and thereafter: 100 percent of ship calls*

Additionally, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at a 100 percent compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.

This mitigation measure satisfies paragraph VIII.A.3 of the ASJ, which provides that LAHD shall install, as mitigation, necessary electrical infrastructure to provide shoreside power for ship hoteling (Alternative Maritime Power [AMP]) and cause the retrofitting of China Shipping marine container ships to accommodate the use of AMP while hoteling; that LAHD shall require, as mitigation, that two China Shipping container ships be retrofitted to accept shoreside electrical

power by August 2004, three ships be retrofitted for AMP by January 2005, four ships retrofitted for AMP by March 31, 2005; and that 30 percent of ships docking at Berths 97-109 use shoreside electric power for hoteling from August 1, 2004, to January 1, 2005, 60 percent from January 1, 2005, through July 1, 2005, and 70 percent after July 1, 2005.

MM AQ-10: Vessel Speed Reduction Program.

All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule:

- 2009 and thereafter: 100 percent

MM AQ-11: Low-Sulfur Fuel.

All ships (100 percent) calling at Berth 97-109 shall use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin (including hoteling for non-AMP ships) beginning on Day 1 of operation. Ships with mono-tank systems or having technical issues prohibiting use of low-sulfur fuel would be exempt from this requirement. The tenant shall notify the Port of such vessels prior to arrival and shall make every effort to retrofit such ships within 1 year.

MM AQ-12: Slide Valve.

Ships calling at Berths 97-109 shall be equipped with slide valves or equivalent on main engines in the following percentages:

- 2009: 25 percent
- 2010: 50 percent
- 2012: 75 percent
- 2014 and thereafter: 100 percent

MM AQ-13: Reroute Cleaner Ships

When scheduling vessels for service to the Port of Los Angeles, Tenant shall ensure that 75 percent of all ship calls to the Berth 97-109 Terminal meet IMO MARPOL Annex VI NO_x emissions limits for Category 3 engines.

MM AQ-14: New Vessel Build

The purchaser shall confer with the ship designer and engine manufacture to determine the feasibility of incorporating all emission reduction technology and/or design options and when ordering new ships bound for the Port of Los Angeles. Such technology shall be designed to reduce criteria pollutant emissions (NO_x, SO_x and PM) and GHG emission (CO, CH₄, O₃, and CFCs). Design considerations and technology shall include, but are not limited to:

1. *Selective Catalytic Reduction Technology*
2. *Exhaust Gas Recirculation*

3. *In-line fuel emulsification technology*
4. *Diesel Particulate Filters (DPFs) or exhaust scrubbers*
5. *Common Rail*
6. *Low NO_x Burners for Boilers*
7. *Implement fuel economy standards by vessel class and engine*
8. *Diesel-electric pod propulsion systems*

MM AQ-15: Yard Tractors at Berth 97-109 Terminal

All yard tractors operated at the Berth 97-109 terminal shall run on alternative fuel (LPG) beginning September 30, 2004, until December 31, 2014 (ASJ Requirement).

Beginning in January 1, 2015, all yard tractors operated at the Berth 97-109 terminal shall be the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM.

MM AQ-16: Yard Equipment at Berth 121-131 Rail Yard.

All diesel-powered equipment operated at the Berth 121-131 terminal rail yard that handles containers moving through the Berth 97-109 terminal shall implement the following measures:

- *Beginning January 1, 2009, all equipment purchases shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.015 gm/hp-hr for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDECS.*
- *By the end of 2012, all equipment less than 750 hp shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.*
- *By the end of 2014, all equipment shall meet USEPA Tier 4 non-road engine standards.*

MM AQ-17: Yard Equipment at Berth 97-109 Terminal

September 30, 2004: All diesel-powered toppicks and sidepicks operated at the Berth 97-109 terminal shall run on emulsified diesel fuel plus a DOC (ASJ Requirement).

January 1, 2009:

- *All RTGs shall be electric.*
- *All toppicks shall have the cleanest available NO_x alternative fueled engines meeting 0.015 gm/hp-hr for PM.*
- *All equipment purchases other than yard tractors, RTGs, and toppicks shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.015 gm/hp-hr*

for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDEC.

By the end of 2012: all terminal equipment less than 750 hp other than yard tractors, RTGs, and toppicks shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.

By the end of 2014: all terminal equipment other than yard tractors, RTGs, and toppicks shall meet USEPA Tier 4 non-road engine standards

In addition to the above requirements, the tenant at Berth 97-109 shall participate in a 1-year electric yard tractor [truck] pilot project. As part of the pilot project, two electric tractors will be deployed at the terminal within 1 year of lease approval. If the pilot project is successful in terms of operation, costs and availability, the tenant shall replace half of the Berth 97-109 yard tractors with electric tractors within 5 years of the feasibility determination.

MM AQ-18: Yard Locomotives at Berth 121-131 Rail Yard

Beginning January 1, 2015, all yard locomotives at the Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF).

MM AQ-19: Clean Truck Program

The tenant shall comply with the Port's Clean Truck Program. Based on participation in the Clean Truck Program, Heavy-duty diesel trucks entering the Berth 97-109 terminal shall meet the USEPA 2007 emission standards for on-road heavy-duty diesel engines (USEPA, 2001) in the following percentages:

- *2009: 50 percent USEPA 2007*
- *2010: 70 percent USEPA 2007*
- *2011: 90 percent USEPA 2007*
- *2012: 100 percent USEPA 2007*

MM AQ-20: LNG Trucks.

Heavy-duty trucks entering the Berth 97-109 Terminal shall be LNG fueled in the following percentages.

- *50 percent in 2012 and 2013*
- *70 percent in 2014 through 2017*
- *100 percent in 2018 and thereafter*

MM AQ-21: Truck Idling Reduction Measure

Within 6 months of the Effective Date and thereafter for the remaining term of the Berth 97-109 Permit and any holdover, the Berth 97-109 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 Berth 97-109 Terminal through measures that include, but are not limited to, the following: (1) operator shall maximize the durations when the main gates are left open, including during off-peak hours (6 p.m. to 7 a.m.), (2) operator shall implement a container tracking and appointment-based truck delivery and pick-up system to minimize truck queuing (trucks lining up to enter and exit the terminal gate), and (3) 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.

NEW/ALTERNATIVE TECHNOLOGY

The following measures are lease measures that would be included in the lease for Berth 97-109 due to projected future emissions levels associated with the proposed Project. The measures do not meet all of the criteria for CEQA or NEPA mitigation measures but are considered important lease measures to reduce future emissions. This lease obligation is distinct from the requirement of further CEQA or NEPA mitigation measures to address impacts of potential subsequent discretionary Project approvals.

MM AQ-22: Periodic Review of New Technology and Regulations.

The Port shall require the Berth 97-109 tenant to review, in terms of feasibility, 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 Berth 97-109 property. 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. Over the course of the lease, the tenant and the Port shall work together to identify potential new technology. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility.

As partial consideration for the Port agreement to issue the permit to the tenant, the tenant shall implement not less frequently than once every 7 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.

MM AQ-23: Throughput Tracking.

If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emissions sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions exceed those in the EIS/EIR, then new or additional mitigations would be applied through MM AQ-22.

MM AQ-24: General Mitigation Measure.

For any of the above mitigation measures (MM AQ-9 through AQ-21), 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.

Rationale for Finding

Changes or alterations in the form of mitigation measures have been identified in the Recirculated Draft EIS/EIR in the form of AQ-9 through AQ-24 which lessen the significant effects of operation. In addition, MM AQ-11, AQ-17, and AQ-21 were changed in the Final EIS/EIR to further reduce emissions, although emissions are still expected to remain significant and unavoidable. The mitigation identified to reduce emissions comes primarily from the CAAP. The CAAP represented a collaborative effort between the Ports of Los Angeles and Long Beach, SCAQMD, CARB, and USEPA to identify mechanisms to reduced emissions at both Ports. Through this collaborative effort, exhaustive research was done on available emissions reduction technology and measures. This EIS/EIR complies with CAAP. In addition, the EIS/EIR also considered mitigation developed as part of the former proposed No Net Increase (NNI) Plan and an analysis of applicable mitigation can be found in Appendix B of the EIS/EIR. Nevertheless, although reduced as a result of the mitigation measures, emissions remain significant and unavoidable as shown in Table 6 below for peak day emissions.

Table 6.1: Peak Daily Operational Emissions (*bold numbers denote significant emissions*)

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Total – Project Year 2005	945	3,428	12,785	5,651	1,027	824
<u>CEQA Impacts</u>						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	784	2,822	11,262	5,622	942	747
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2015	1,033	7,272	18,933	12,192	1,814	1,353
<u>CEQA Impacts</u>						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	871	6,665	17,410	12,164	1,729	1,275
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2030	802	7,170	15,528	12,460	1,716	1,225
<u>CEQA Impacts</u>						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	641	6,564	14,005	12,432	1,631	1,147
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2045	775	7,105	15,263	12,460	1,703	1,213
<u>CEQA Impacts</u>						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	614	6,498	13,740	12,432	1,618	1,135
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes

Table 6.2: Peak Daily Mitigated Operational Emissions (*bold numbers denote significant emissions*)

Emission Source	Peak Daily Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Project Year 2005	1,016	8,714	11,734	5,629	896	706
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	855	8,107	10,211	5,601	812	628
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2015	470	5,312	5,663	204	404	202
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	309	4,706	4,140	176	320	125
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2030	629	6,921	7,501	209	499	259
CEQA Impacts						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	467	6,314	5,978	180	414	181
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes
Total – Project Year 2045	614	6,790	7,330	209	489	249
CEQA Impacts						
CEQA Baseline Emissions	161	607	1,523	28	85	78
Project minus CEQA Baseline	453	6,184	5,807	180	404	171
Thresholds	55	550	55	150	150	55
Significant?	Yes	Yes	Yes	Yes	Yes	Yes

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) Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.
- c) Hoteling emissions include regional power plant emissions from AMP electricity generation.
- d) Emissions might not precisely add due to rounding. For further explanation, refer to the discussion in Section 3.2.4.1.
- e) 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.

The Final EIR has accelerated implementation and/or modified of some mitigation measures proposed in the Recirculated Draft EIS/EIR, namely MM AQ-11 (low sulfur fuel), MMAQ-17 (yard equipment) and MM AQ-21 (truck idling), to further reduce operational emissions. In regards to low sulfur fuel, the new requirements call all (100%) of ships to use low sulfur fuel (0.2%) from day one of operation unless there are technical issues, thereby increasing low sulfur fuel requirements for beyond the Recirculated Draft EIS/EIR requirements. In response to a number of comments received on electric yard tractors, a pilot project was included in MM AQ-17. In addition, MM AQ-21 was amended to clarify restrictions on truck idling. The net effect of the revised assumptions/mitigation measures would reduce mitigated operational emissions compared to the uncorrected values. However, because the new requirements capture a yet to be determined number of ships, the revised mitigated operational emissions are assumed to still exceed the CEQA emissions thresholds. Therefore, the revisions to operational assumptions/mitigation measures used in the Draft Recirculated EIS/EIR that are included in the Final EIS/EIR were not evaluated for precise quantification of their potential to reduce emissions from proposed operational activities.

Mitigation measures AQ-9 through AQ-24 represent feasible means to reduce air pollution impacts from proposed operational sources. In addition, mitigation measures AQ-15 and AQ-17 satisfy the requirements of ASJ, paragraph VIII.A.1, which provide that LAHD shall require, as mitigation, all topsticks and sidepicks (shoreside loading equipment) employed at the Berth 97-109 Container Terminal to use emulsified diesel fuel and diesel oxidation catalysts if these fuels are found to be technically feasible as specified in the ASJ and can be safely implemented, and that LAHD shall require, as mitigation, the terminal operator to phase-in the use of alternative-fuel tractors such that by September 30, 2004, all tractors would be alternative-fuel tractors, unless these tractors are not technically feasible in accordance with the terms of the ASJ. Also, mitigation measure AQ-11 satisfies paragraph VIII.A.4 of the ASJ, which provides that the Port shall evaluate the feasibility and emissions benefits of using available grades of marine fuel with 2,000 ppm or less sulfur content in commercial container vessels when in coastal waters and at berth. The discussion below includes more details on suggested changes to mitigation measures raised in comments on the Recirculated Draft EIS/EIR.

Public Comment:

Thirty-six five comments were received on the Recirculated Draft EIS/EIR in regards to further mitigation to reduce impacts from AQ-3. Comments were received from USEPA (1-10) AQMD (comments 10-8, 10-9, 10-11, 10-12, 10-13, 10-14 and 10-15), NRDC (comments 15-6, 15-7, 16-5, 16-7, 16-8, 16-9, 16-11, 16-12, 16-14, 16-15, 16-47 16-58), the PCAC Air Quality Subcommittee (PCAQ-AQ, comments 20-2, 20-3, 20-4, 20-8 and 20-10), the PCAC Past EIR Subcommittee (PCAC EIR, comment 21-8), the Central San Pedro Neighborhood Council (CSPNC, comment 22-3), NWSPNC (comment 23-8, and 23-9) and CSE (comments 25-14 and 25-15). Comments requested increased ship requirements including AMP, slide valves, and new technology, increased rail and truck requirements, an annual scorecard, changes in operation, offset programs, and alternative rail transport systems.

Ocean Going Vessels

Comments were received on-ocean going vessel mitigations from AQMD (10-9, 10 and 11), NRDC (15-6, 16-5, 7, 8 and 9), PCAC AQ (20-2, 3 and 4), CSPNC (22-3) and CSE (25-14). Comments requested the following: (1) that the phase-in schedule for AMP, low sulfur fuel, and slide valve use be accelerated to further reduce emissions from ocean going vessels; (2) that ships use 0.1% low sulfur fuel instead of 0.2% low sulfur fuel; and (3) require new emission control technology on main engines. In addition, there was a suggestion to use Alternative Maritime Emission Control System (AMECS) instead of or in addition to AMP.

1. Alternative Maritime Power (AMP) and Slide Valves

A number of comments called for expediting the phase-in of AMP at the terminal. China Shipping, in compliance with the ASJ, retrofitted twenty-nine ships all within the 3,000 to 5,000 TEUs range. Since that time, China Shipping has installed AMP on an additional four 8500 TEU ships at 6.6 kV. As discussed in Chapters 2 and 3.2, the ship size is expected to increase from the 3000-5000 TEU class to the 8,000 to 9,000 TEU ship size with occasional visits from 9,000 to 11,000 TEUs ships. While a large portion of the ships in China Shipping's current Port of Los Angeles service are retrofitted with AMP, only a few (four) of the larger ships in their worldwide fleet are retrofitted (while ChinaChins Shipping will order some brand new ships to service the Port, some of the ships will also be repositioned from existing vessel strings elsewhere). To comply with the ASJ and to achieve the proposed AMP levels in MM AQ-9, these ships will also

need to be retrofitted. The phase-in schedule allows for such retrofits to occur and therefore, the mitigation measure was not changed.

Slide valves are relatively easy to install as a retrofit on container ships, not overly expensive, and provide good reductions of NO_x and PM. However, slide valves are specific to Man B&W engines, and cannot currently be installed on ships with engines of different manufacture. Other engine manufactures are working on equivalent technologies, and preliminary tests appear promising. Therefore, slide valves are being phased in over time in **MM AQ-12** to allow for this research and development.

2. Low Sulfur Fuel

In response to a number of requests to strengthen the low sulfur fuel requirements, MMAQ-11 was changed in the Final EIS/EIR. The measure now requires all ships (100 percent) calling at Berth 97-109 shall use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin (including hoteling for non-AMP ships) beginning on Day 1 of operation. Ships with mono-tank systems or having technical issues prohibiting use of low-sulfur fuel would be exempt from this requirement and in such cases, the tenant would be required to notify the Port of such vessels prior to arrival and shall make every effort to retrofit such ships within 1 year.

The comments also called for the phase-in of fuel with a maximum sulfur content of 0.1 percent. To allow for some margin of error and product contamination in the distribution system, when a shipping line orders 0.2 percent sulfur fuel, the shipping line is actually receiving a fuel with a lower sulfur content of between 0.13 and 0.16 percent (POLA, 2007). Therefore, if the mitigation measure required 0.1 percent fuel, the supplier would have to provide fuel at a content of lower than 0.1 percent, which might not be possible in current refineries (POLA, 2007). Additionally, 0.2 percent is consistent with the CAAP. In developing and approving the CAAP, the Ports of Los Angeles and Long Beach met and collaborated with agencies (including CARB, SCAQMD, and USEPA), environmental and community groups, and the shipping industry. As a result of this collaborative process, 0.2 percent sulfur fuel was found to be the lowest-sulfur level fuel feasible Port-wide perspective and for mitigation of the impacts of the proposed Project, and use of this fuel for that purpose represents consensus.

3. Emission Control Technology for Main Engines

A number of comments were received requesting additional emission control technologies for main engines, such as selective catalytic reduction (SCR), AMECs and the Blue Skies Series. Such technology are currently not feasible for retrofits on large OGVs, such as container ships. For example, although SCR technology has been demonstrated on four new OGVs carrying scrap/steel in the San Francisco Bay Area, the applicability of low-emissions technologies like SCR to large OGVs such as container ships needs to be further evaluated and demonstrated. SCR is currently being tested as part of the CAAP TAP. There are still a number of feasibility questions regarding SCR, including spatial needs and available reactant (ammonia) and byproduct issues. At this time, SCR is not considered feasible. The Blue Skies Series Category 3 engines refer to a theoretical ship retrofit program developed for the No Net Increase (NNI) Plan being considered by the Port. NNI was never adopted by the Port or the City of Los Angeles. The Blue Sky Series engines are not yet available and, therefore, are not considered feasible at this time. The Port anticipates that AMECS technology may eventually prove feasible and cost-effective as an alternative to AMP for some or all vessels calling the Port, especially

marine oil tankers. Parts of an AMECS system have been tested as part of a pilot project at the Port of Long Beach that is focused on vessels carrying dry bulk, break bulk, and roll-on/roll-off cargo (Port of Long Beach 2006). However, at this time, the full system has not been tested on any vessel.

However, the Port expects that some or all of the technologies mentioned in the comments will be feasible for retrofits in the future. **MM AQ-22** provides a process to consider new or alternative emission control technologies in the future and an implementation strategy to ensure compliance. Under **MM AQ-22**, the opportunity to add new measures to the lease would occur not less frequently than once every 7 years. Therefore, no additional mitigation measures are required.

Truck and Rail Requirements

Comments were received truck and rail mitigations from AQMD (10-12, 13, and 15), NRDC (15-6, 16, 16-14 and 15), PCAC AQ (20-4), and CSE (25-15). Comments requested the following: (1) increase yard and mainline locomotive requirements; (2) faster Clean Truck and LNG truck phase-in schedules and electric trucks; and (3) an alternative rail transport system.

1. Increased Yard and Mainline Locomotive Requirements

A number of comments requested further emission controls on both yard and mainline locomotives, including accelerating the use of DPFs and RL-2 requirements for mainline locomotives, namely from AQMD, NRDC and PCAC AQ.

MM AQ-18 requires, beginning January 1, 2015, that all yard locomotives at the Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal be equipped with a diesel particulate filter (DPF). In response to accelerating this schedule, China Shipping has no direct control over locomotive operations at the Berth 121-131 (on-dock) rail yard. The current yard locomotive operator at the Berth 121-131 rail yard is PHL. PHL is a third-party independent rail company that provides rail transportation, yard switching, maintenance, and dispatching services to the San Pedro Bay Ports. PHL manages all rail dispatching and switching functions at the on-dock rail yards at the two ports. PHL's current lease at the Port of Los Angeles expires at the end of 2014. Therefore, January 1, 2015, represents the earliest date at which the Port can require diesel particulate filters (DPFs) on yard locomotives through new lease measures.

In contrast to switchers operating at on-dock rail yards, the Port has much less control over main line locomotives, which enter the South Coast Air Basin from all parts of the U.S. (although CARB has had some success in reducing locomotive emissions through their MOU with the rail lines). The railroads are a federal source and controlled by federal regulation under the purview of USEPA. The Ports, therefore, would request that USEPA move to strengthen and/or speed up implementation of emission controls on main line locomotives. In the meantime, the Port will continue to negotiate with Class 1 railroads to work toward reducing emissions from line-haul locomotives using on-dock rail yards, consistent with the schedule set forth in CAAP measures RL-2 and RL-3.

Due to the above operational limitations, no additional mitigation is required.

2. Trucks

NRDC requested the Port accelerate the Clean Truck and LNG truck phase-in schedules. **MM AQ-19** is aligned with the Clean Truck Program of the Port. The Port believes that the implementation schedule of this measure is as aggressive as possible, given the magnitude and complexity of this program. Similarly, the Port believes that the implementation schedule for **MM AQ-20** (LNG Trucks) is as aggressive as possible, considering the large number of truck replacements that would be necessary. AQMD and NRDC both requested the Port include the use of electric drayage trucks as a mitigation measure. Electric (on-road) drayage trucks are currently being tested in certain applications around the Port as part of the TAP. Electric drayage trucks are not currently feasible. To illustrate the difficulties, a recent test of an electric drayage trip found that the electric truck did not have enough power to traverse the Vincent Thomas Bridge. Although the solutions are being worked on, it is unclear if or when feasibility will be demonstrated. If electric drayage trucks are determined to be feasible and become commercially available in the future, they can be considered a new lease measure through **MM AQ-22** (Periodic Review of New Technology and Regulations). Therefore no changes to the mitigation measure are required.

3. Alternative Rail Transport System.

Comments were received from AQMD, NRDC, and CSE requesting the Port include an alternative rail transport system as a mitigation measure in the proposed Project. Due to the complexity and cost of implementing new low-emission technologies, such as rail electrification, development and implementation of these technologies are best handled on a Port-wide basis. The CAAP TAP is a process to achieve this objective. For example, the Advanced Locomotive Emissions Control System (ALECS) is still in the demonstration phase and therefore is currently not a feasible mitigation measure. However, should ALECS become feasible and commercially available in the future, **MM AQ-22** provides a process to consider new or alternative emission control technologies in the future and an implementation strategy to ensure compliance. Under **MM AQ-22**, the opportunity to add new measures to the lease would occur not less frequently than once every 7 years.

Yard Equipment

Comments were received on yard equipment from AQMD (10-11), NRDC (16-11, and 47), PCAC AQ (20-10), and CSE (25-15). Comments requested the following: (1) electric yard tractors.

In response to the comments on electric yard tractors, **MM AQ-17** was amended to require a pilot program. Electric yard tractors are still in the development and testing phase and therefore cannot be applied as wholesale mitigation. However, **MM AQ-17** requires the tenant at Berth 97-109 to participate in a 1-year electric yard tractor [truck] pilot project. As part of the pilot project, two electric tractors will be deployed at the terminal within 1 year of lease approval. If the pilot project is successful in terms of operation, costs and availability, the tenant will be required to replace half of the Berth 97-109 yard tractors with electric tractors within 5 years of the feasibility determination.

Lease Reopener

NRDC requested the Port include a lease reopener. **MM AQ-22** provides a process to consider new or alternative emission control technologies in the future and an implementation strategy to ensure compliance. Under **MM AQ-22**, the opportunity to add new measures to the lease would occur at least once every 7 years. The proposed Project already includes a lease reopener and therefore, an additional measure is not required.

Annual Scorecard

The PCAC EIR Subcommittee has requested that the Port include an environmental scorecard as mitigation for this project to address potential cargo increases above what was assumed in the document. The scorecard would be public document prepared by the LAHD that would present a report on the actual levels of throughput as compared to the levels identified in the EIR. As described in the responses to Comments 20-5 and 21-3, throughput is not expected to exceed the estimates contained in the Recirculated Draft EIS/EIR unless new technology that allows for increased throughput is developed and implemented. However, such implementation would be subject to further environmental review, including identification of mitigation. Because new technology does not currently exist, analyzing it for the proposed Project is considered speculative. As stated in the mitigation measure, the Port shall determine feasibility, not the tenant. The Port intends to help the tenant implement the new technology. Such assistance could come in the form of financial contributions and/or incentives, technical expertise, and physical modifications (subject to appropriate environmental analysis). Information such as ship calls and truck/rail trips are inherent to any throughput calculations and would be part of the analysis completed by staff through **MM AQ-23**. Therefore, an environmental scorecard mitigation is not required.

Offset Program for Criteria Pollutants

The NWSPNC requested that the Port establish an offset program to address the residual emissions of existing Port operations, other than the proposed Project. All measures determined by the Port to be feasible for the proposed Project are prescribed as mitigation in the EIR. In addition, **MM AQ-22** provides a process to consider new or alternative emission control technologies for the proposed Project at regular intervals during the term of the lease and an implementation strategy to ensure compliance. Under **MM AQ-22**, the opportunity to add new measures to the lease would occur at least every 7 years. However, regarding the comment to provide offset mitigation for sources other than the Project, neither NEPA nor CEQA authorize the imposition of mitigation in the context of this EIS/EIR for the purpose of reducing or avoiding impacts that are not directly or indirectly attributable to the proposed Project. Such impacts are being addressed by the Port outside the NEPA/CEQA process, through implementation of CAAP, the recently agreed Memorandum of Understanding (MOU). Through the MOU, the Port has agreed to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by Port operations outside of the context of project-specific NEPA and/or 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 terminal up to an amount of approximately \$4 million. The off-Port community benefits of the MOU are designed to offset overall effects of existing Port operations.

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

Maximum offsite ambient pollutant concentrations associated with the proposed Project operations would be significant for NO₂ (1-hour average and annual average) and PM₁₀ and PM_{2.5} (24-hour average). Therefore, significant impacts under CEQA would occur.

Finding

Mitigation measures AQ-9 through AQ-24 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 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 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.

MM AQ-9: *Alternative Maritime Power (AMP).*

China Shipping ships calling at Berths 97-109 must use AMP at the following percentages while hoteling in the Port:

- *January 1 to June 30, 2005: 60 percent of total ship calls (ASJ Requirement)*
- *July 1, 2005: 70 percent of total ship calls (ASJ Requirement)*
- *January 1, 2010: 90 percent of ship calls*
- *January 1, 2011, and thereafter: 100 percent of ship calls*

Additionally, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at a 100 percent compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.

MM AQ-10: *Vessel Speed Reduction Program.*

All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule:

- *2009 and thereafter: 100 percent*

MM AQ-11: *Low-Sulfur Fuel.*

All ships (100 percent) calling at Berth 97-109 shall use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin (including hoteling for non-AMP ships) beginning on Day 1 of operation. Ships with mono-tank systems or having technical issues prohibiting use of low-sulfur fuel would be exempt from this requirement. The tenant shall notify the Port of such vessels prior to arrival and shall make every effort to retrofit such ships within 1 year

MM AQ-12: Slide Valve.

Ships calling at Berths 97-109 shall be equipped with slide valves or equivalent on main engines in the following percentages:

- 2009: 25 percent
- 2010: 50 percent
- 2012: 75 percent
- 2014 and thereafter: 100 percent

MM AQ-13: Reroute Cleaner Ships

When scheduling vessels for service to the Port of Los Angeles, Tenant shall ensure that 75 percent of all ship calls to the Berth 97-109 Terminal meet IMO MARPOL Annex VI NO_x emissions limits for Category 3 engines.

MM AQ-14: New Vessel Build

The purchaser shall confer with the ship designer and engine manufacture to determine the feasibility of incorporating all emission reduction technology and/or design options and when ordering new ships bound for the Port of Los Angeles. Such technology shall be designed to reduce criteria pollutant emissions (NO_x, SO_x and PM) and GHG emission (CO, CH₄, O₃, and CFCs). Design considerations and technology shall include, but are not limited to:

1. Selective Catalytic Reduction Technology
2. Exhaust Gas Recirculation
3. In-line fuel emulsification technology
4. Diesel Particulate Filters (DPFs) or exhaust scrubbers
5. Common Rail
6. Low NO_x Burners for Boilers
7. Implement fuel economy standards by vessel class and engine
8. Diesel-electric pod propulsion systems

MM AQ-15: Yard Tractors at Berth 97-109 Terminal

All yard tractors operated at the Berth 97-109 terminal shall run on alternative fuel (LPG) beginning September 30, 2004, until December 31, 2014 (ASJ Requirement).

Beginning in January 1, 2015, all yard tractors operated at the Berth 97-109 terminal shall be the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM.

MM AQ-16: Yard Equipment at Berth 121-131 Rail Yard.

All diesel-powered equipment operated at the Berth 121-131 terminal rail yard that handles containers moving through the Berth 97-109 terminal shall implement the following measures:

- *Beginning January 1, 2009, all equipment purchases shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.0150 gm/hp-hr for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDECS.*
- *By the end of 2012, all equipment less than 750 hp shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.*
- *By the end of 2014, all equipment shall meet USEPA Tier 4 non-road engine standards.*

MM AQ-17: Yard Equipment at Berth 97-109 Terminal

September 30, 2004: All diesel-powered toppicks and sidepicks operated at the Berth 97-109 terminal shall run on emulsified diesel fuel plus a DOC (ASJ Requirement).

January 1, 2009:

- *All RTGs shall be electric.*
- *All toppicks shall have the cleanest available NO_x alternative fueled engines meeting 0.015 gm/hp-hr for PM.*
- *All equipment purchases other than yard tractors, RTGs, and toppicks shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.015 gm/hp-hr for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDEC.*

By the end of 2012: *all terminal equipment less than 750 hp other than yard tractors, RTGs, and toppicks shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.*

By the end of 2014: *all terminal equipment other than yard tractors, RTGs, and toppicks shall meet USEPA Tier 4 non-road engine standards*

In addition to the above requirements, the tenant at Berth 97-109 shall participate in a 1-year electric yard tractor [truck] pilot project. As part of the pilot project, two electric tractors will be deployed at the terminal within 1 year of lease approval. If the pilot project is successful in terms of operation, costs and availability, the tenant shall replace half of the Berth 97-109 yard tractors with electric tractors within 5 years of the feasibility determination.

MM AQ-18: Yard Locomotives at Berth 121-131 Rail Yard

Beginning January 1, 2015, all yard locomotives at the Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF).

MM AQ-19: Clean Truck Program

The tenant shall comply with the Port's Clean Truck Program. Based on participation in the Clean Truck Program, Heavy-duty diesel trucks entering the Berth 97-109 terminal shall meet the USEPA 2007 emission standards for on-road heavy-duty diesel engines (USEPA, 2001) in the following percentages:

- 2009: 50 percent USEPA 2007
- 2010: 70 percent USEPA 2007
- 2011: 90 percent USEPA 2007
- 2012: 100 percent USEPA 2007

MM AQ-20: LNG Trucks.

Heavy-duty trucks entering the Berth 97-109 Terminal shall be LNG fueled in the following percentages.

- 50 percent in 2012 and 2013
- 70 percent in 2014 through 2017
- 100 percent in 2018 and thereafter

MM AQ-21: Truck Idling Reduction Measure

Within 6 months of the Effective Date and thereafter for the remaining term of the Berth 97-109 Permit and any holdover, the Berth 97-109 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 Berth 97-109 Terminal through measures that include, but are not limited to, the following: (1) operator shall maximize the durations when the main gates are left open, including during off-peak hours (6 p.m. to 7 a.m.), (2) operator shall implement a container tracking and appointment-based truck delivery and pick-up system to minimize truck queuing (trucks lining up to enter and exit the terminal gate), and (3) 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.

NEW/ALTERNATIVE TECHNOLOGY

The following measures are lease measures that would be included in the lease for Berth 97-109 due to projected future emissions levels associated with the proposed Project. The measures do not meet all of the criteria for CEQA or NEPA mitigation measures but are considered important lease measures to reduce future emissions. This lease obligation is distinct from the requirement

of further CEQA or NEPA mitigation measures to address impacts of potential subsequent discretionary Project approvals.

MM AQ-22: Periodic Review of New Technology and Regulations.

The Port shall require the Berth 97-109 tenant to review, in terms of feasibility, 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 Berth 97-109 property. 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. Over the course of the lease, the tenant and the Port shall work together to identify potential new technology. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility.

As partial consideration for the Port agreement to issue the permit to the tenant, the tenant shall implement not less frequently than once every 7 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.

MM AQ-23: Throughput Tracking.

If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emissions sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions exceed those in the EIS/EIR, then new or additional mitigations would be applied through MM AQ-22.

MM AQ-24: General Mitigation Measure.

For any of the above mitigation measures (MM AQ-9 through AQ-21), 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.

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 AQ-9 through AQ-24 which substantially lessen significant operational emissions, as shown in Table 7. Although reduced as a result of the mitigation measures, ambient air concentrations emissions remain significant and unavoidable for NO₂, PM₁₀ and PM_{2.5}.

Table 7.1a. Maximum Offsite NO₂ 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	1-hour	1,780	263	2,043	338
	Annual	55	52.7	108	56.4
CO	1-hour	1,833	4,809	6,642	23,000
	8-hour	456	4,008	4,464	10,000

Notes: Exceedances of the thresholds are indicated in bold.

Table 7.1b. Maximum Offsite PM₁₀ and PM_{2.5} Concentrations Associated with Operation of the Proposed Project without Mitigation

	Maximum Modeled Concentration of Proposed Project (µg/m ³)	Maximum Modeled Concentration of CEQA Baseline (µg/m ³)	Maximum Modeled Concentration of NEPA Baseline (µg/m ³)	Ground-Level Concentration CEQA Increment ^c (µg/m ³)	Ground-Level Concentration NEPA Increment ^c (µg/m ³)	SCAQMD Threshold (µg/m ³)
PM ₁₀ 24-hour	15.6	10.2	5.7	10.0	10.0	2.5
PM _{2.5} 24-hour	12.9	9.4	3.8	8.0	9.1	2.5

Notes: Exceedances of the threshold are indicated in bold. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

Table 7.2a Maximum Offsite NO₂ and CO Concentrations Associated with Operation of the Proposed Project after Mitigation

Pollutant	Averaging Time	Maximum Modeled Concentration of Mitigated Project (µg/m ³)	Background Concentration ^b (µg/m ³)	Total Ground Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)
NO ₂ ^c	1-hour	1,919	263	2,182	338
	Annual	48	52.7	101	56.4
CO	1-hour	10,613	4,809	15,422	23,000
	8-hour	2,620	4,008	6,628	10,000

Notes: Exceedances of the thresholds are indicated in bold.

Table 7.2b Maximum Offsite PM₁₀ and PM_{2.5} Concentrations Associated with Operation of the Proposed Project after Mitigation

	Maximum Modeled Concentration of Mitigated Project (µg/m ³)	Maximum Modeled Concentration of CEQA Baseline (µg/m ³)	Maximum Modeled Concentration of NEPA Baseline (µg/m ³)	Ground Level Concentration CEQA Increment (µg/m ³)	Ground Level Concentration NEPA Increment (µg/m ³)	SCAQMD Threshold (µg/m ³)
PM ₁₀ 24-hour	10.1	10.2	5.67	6.5	6.2	2.5
PM _{2.5} 24-hour	7.8	9.4	3.8	5.2	5.3	2.5

Notes: Exceedances of the threshold are indicated in bold. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

With mitigation, offsite ambient concentrations from proposed Project operations would be reduced for PM₁₀, PM_{2.5}, and annual NO_x, but would increase for CO and 1-hour NO_x. These increases in concentrations are a result of LPG yard tractors having much higher NO_x and CO emissions than their counterpart diesel yard tractors in the peak emission analysis year 2010. From a CEQA perspective, offsite ambient concentrations from proposed Project operations after mitigation would be reduced for PM₁₀ and PM_{2.5}, but would remain significant for 1-hour and annual NO₂, and 24-hour PM₁₀ and PM_{2.5}. Therefore, these emissions represent significant and unavoidable air quality impacts under CEQA.

The Final EIR has accelerated implementation and/or modified of some mitigation measures proposed in the Recirculated Draft EIS/EIR, namely MM AQ-11 (low sulfur fuel), MMAQ-17 (yard equipment) and MM AQ-21 (truck idling), to further reduce operational emissions. In regards to low sulfur fuel, the new requirements call all (100%) of ships to use low sulfur fuel (0.2%) from day one of operation unless there are technical issues, thereby increasing low sulfur fuel requirements for beyond the Recirculated Draft EIS/EIR requirements. In response to a number of comments received on electric yard tractors, a pilot project was included in MM AQ-17. In addition, MM AQ-21 was amended to clarify restrictions on truck idling. The net effect of the revised assumptions/mitigation measures would reduce mitigated operational emissions compared to the uncorrected values. However, because the new requirements capture a yet to be determined number of ships, the revised mitigated operational emissions are assumed to still exceed the CEQA emissions thresholds. Therefore, the revisions to operational assumptions/mitigation measures used in the Draft Recirculated EIS/EIR that are included in the Final EIS/EIR were not evaluated for precise quantification of their potential to reduce emissions from proposed operational activities.

Mitigation measures AQ-9 through AQ-24 represent feasible means to reduce air pollution impacts from proposed operational sources.

Public Comment

No specific public comments were received in regards to impact AQ-4. However, the responses to comments received on impact AQ-3 above would also pertain to AQ-2, and likewise establish that additional mitigation is infeasible. Please see discussion under impact AQ-3 above.

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

Project operations would emit toxic air contaminants (TACs) that could affect public health. An HRA spanning years 2004-2073 was conducted pursuant to a Protocol reviewed and approved by both CARB and SCAQMD (POLA, 2005). The period 2004-2073 is the 70-year exposure period with the greatest combined diesel particulate matter (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 operations. The Hotspots Analysis and Reporting Program (HARP), version 1.3 (CARB, 2006), 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 EIS/EIR.

The main sources of TACs from proposed Project operations would be DPM emissions from ships, tugboats, terminal equipment, locomotives, and trucks. Project construction emissions from Phases II and III were also included in the HRA. As shown in Appendix E3, the contribution from Project construction to the health risk results would be minor relative to Project operational emissions. Phase

I of construction was not included in the HRA because the 70-year period that includes Phase I (2001-2070) has fewer DPM emissions than the 2004-2073 period.

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 Project would generate emissions of DPM, **Impact AQ-7** also discusses 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.

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 from a CEQA standpoint, this 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 (10 in a million for cancer risk and 1.0 for acute and chronic health hazards).

To estimate cancer risk impacts, VOC and DPM emissions were projected over a 70-year period, from 2004 through 2073. This 70-year projection of emissions was done for the proposed Project, and CEQA baseline⁵, to enable a proper calculation of the CEQA cancer risk increments. To calculate the 70-year emissions, estimates of activity levels and emission factors were made for each year from 2004 through 2073. Activity levels after 2045 were held constant at their 2045 values. For the CEQA baseline, activity levels were held constant at their 2001 values for all years. 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.

Table 7 presents the maximum predicted health impacts associated with the proposed Project without mitigation. The table includes estimates of individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index at the maximally exposed residential, occupational, sensitive, student, and recreational receptors. Results are presented for the proposed Project, CEQA baseline, NEPA baseline, CEQA increment (proposed Project minus CEQA baseline), and NEPA increment (proposed Project minus NEPA baseline).

For each receptor type, the various health values in Table 7 often occur at different locations. This means that the CEQA increment cannot necessarily be determined by subtracting the CEQA baseline

⁵ The 70-year emissions projection for the CEQA Baseline was done for 2001-2070, as this is the 70-year period projected forward from the CEQA Baseline year.

result from the proposed Project result in the table. Instead, the increments must be subtracted at each of the hundreds of modeled receptors, and the receptor with the highest difference is selected as the maximum increment.

The mitigation measures would reduce the maximum residential cancer risk associated with the proposed Project by about 81 percent. The maximum residential chronic hazard index would be reduced by about 22 percent. The maximum residential acute hazard index would be reduced by about 15 percent. The maximum CEQA cancer risk increment after mitigation is predicted to be 20 in a million (20×10^{-6}), at a recreational receptor. The maximum residential CEQA cancer risk increment after mitigation is predicted to be 11 in a million (11×10^{-6}), which is above the significance threshold. The receptor location for the maximum residential increment is in Wilmington, north of C Street and east of Figueroa Street. The CEQA cancer risk increment would also exceed the threshold at an occupational receptor. These exceedances are considered significant impacts under CEQA. The maximum chronic hazard index CEQA increment would remain less than significant for all receptor types. The acute hazard index CEQA increment is predicted to remain significant at residential, occupational, and recreational receptors.

Finding

Mitigation measures AQ-9 through AQ-24 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 7 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 cancer and chronic health risk thresholds. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

MM AQ-9: Alternative Maritime Power (AMP).

China Shipping ships calling at Berths 97-109 must use AMP at the following percentages while hoteling in the Port:

- *January 1 to June 30, 2005: 60 percent of total ship calls (ASJ Requirement)*
- *July 1, 2005: 70 percent of total ship calls (ASJ Requirement)*
- *January 1, 2010: 90 percent of ship calls*
- *January 1, 2011, and thereafter: 100 percent of ship calls*

Additionally, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at 100% compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.

MM AQ-10: Vessel Speed Reduction Program.

All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area in the following implementation schedule:

- 2009 and thereafter: 100 percent

MM AQ-11: Low-Sulfur Fuel.

All ships (100 percent) calling at Berth 97-109 shall use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin (including hoteling for non-AMP ships) beginning on Day 1 of operation. Ships with mono-tank systems or having technical issues prohibiting use of low-sulfur fuel would be exempt from this requirement. The tenant shall notify the Port of such vessels prior to arrival and shall make every effort to retrofit such ships within 1 year

MM AQ-12: Slide Valve.

Ships calling at Berths 97-109 shall be equipped with slide valves or equivalent on main engines in the following percentages:

- 2009: 25 percent
- 2010: 50 percent
- 2012: 75 percent
- 2014 and thereafter: 100 percent

MM AQ-13: Reroute Cleaner Ships

When scheduling vessels for service to the Port of Los Angeles, Tenant shall ensure that 75 percent of all ship calls to the Berth 97-109 Terminal meet IMO MARPOL Annex VI NO_x emissions limits for Category 3 engines.

MM AQ-14: New Vessel Build

The purchaser shall confer with the ship designer and engine manufacture to determine the feasibility of incorporating all emission reduction technology and/or design options and when ordering new ships bound for the Port of Los Angeles. Such technology shall be designed to reduce criteria pollutant emissions (NO_x, SO_x and PM) and GHG emission (CO, CH₄, O₃, and CFCs). Design considerations and technology shall include, but are not limited to:

1. Selective Catalytic Reduction Technology
2. Exhaust Gas Recirculation
3. In-line fuel emulsification technology
4. Diesel Particulate Filters (DPFs) or exhaust scrubbers
5. Common Rail
6. Low NO_x Burners for Boilers
7. Implement fuel economy standards by vessel class and engine
8. Diesel-electric pod propulsion systems

MM AQ-15: Yard Tractors at Berth 97-109 Terminal

All yard tractors operated at the Berth 97-109 terminal shall run on alternative fuel (LPG) beginning September 30, 2004, until December 31, 2014 (ASJ Requirement).

Beginning in January 1, 2015, all yard tractors operated at the Berth 97-109 terminal shall be the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM.

MM AQ-16: Yard Equipment at Berth 121-131 Rail Yard.

All diesel-powered equipment operated at the Berth 121-131 terminal rail yard that handles containers moving through the Berth 97-109 terminal shall implement the following measures:

- Beginning January 1, 2009, all equipment purchases shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.015 gm/hp-hr for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDECS.
- By the end of 2012, all equipment less than 750 hp shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.
- By the end of 2014, all equipment shall meet USEPA Tier 4 non-road engine standards.

MM AQ-17: Yard Equipment at Berth 97-109 Terminal

September 30, 2004: All diesel-powered toppicks and sidepicks operated at the Berth 97-109 terminal shall run on emulsified diesel fuel plus a DOC (ASJ Requirement).

January 1, 2009:

- All RTGs shall be electric.
- All toppicks shall have the cleanest available NO_x alternative fueled engines meeting 0.015 gm/hp-hr for PM.
- All equipment purchases other than yard tractors, RTGs, and toppicks shall be either (1) the cleanest available NO_x alternative-fueled engine meeting 0.015 gm/hp-hr for PM or (2) the cleanest available NO_x diesel-fueled engine meeting 0.015 gm/hp-hr for PM. If there are no engines available that meet 0.015 gm/hp-hr for PM, the new engines shall be the cleanest available (either fuel type) and will have the cleanest VDEC.

By the end of 2012: all terminal equipment less than 750 hp other than yard tractors, RTGs, and toppicks shall meet the USEPA Tier 4 on-road or Tier 4 non-road engine standards.

By the end of 2014: all terminal equipment other than yard tractors, RTGs, and toppicks shall meet USEPA Tier 4 non-road engine standards

In addition to the above requirements, the tenant at Berth 97-109 shall participate in a 1-year electric yard tractor [truck] pilot project. As part of the pilot project, two electric tractors will be deployed at the terminal within 1 year of lease approval. If the pilot project is successful in terms of operation, costs and availability, the tenant shall replace half of the Berth 97-109 yard tractors with electric tractors within 5 years of the feasibility determination.

MM AQ-18: Yard Locomotives at Berth 121-131 Rail Yard

Beginning January 1, 2015, all yard locomotives at the Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF).

MM AQ-19: Clean Truck Program

The tenant shall comply with the Port's Clean Truck Program. Based on participation in the Clean Truck Program, Heavy-duty diesel trucks entering the Berth 97-109 terminal shall meet the USEPA 2007 emission standards for on-road heavy-duty diesel engines (USEPA, 2001) in the following percentages:

- 2009: 50 percent USEPA 2007
- 2010: 70 percent USEPA 2007
- 2011: 90 percent USEPA 2007
- 2012: 100 percent USEPA 2007

MM AQ-20: LNG Trucks.

Heavy-duty trucks entering the Berth 97-109 Terminal shall be LNG fueled in the following percentages.

- 50 percent in 2012 and 2013
- 70 percent in 2014 through 2017
- 100 percent in 2018 and thereafter

MM AQ-21: Truck Idling Reduction Measure

Within 6 months of the Effective Date and thereafter for the remaining term of the Berth 97-109 Permit and any holdover, the Berth 97-109 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 Berth 97-109 Terminal through measures that include, but are not limited to, the following: (1) operator shall maximize the durations when the main gates are left open, including during off-peak hours (6 p.m. to 7 a.m.), (2) operator shall implement a container tracking and appointment-based truck delivery and pick-up system to minimize truck queuing (trucks lining up to enter and exit the terminal gate), and (3) 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.

NEW/ALTERNATIVE TECHNOLOGY

The following measures are lease measures that would be included in the lease for Berth 97-109 due to projected future emissions levels associated with the proposed Project. The measures do not meet all of the criteria for CEQA or NEPA mitigation measures but are considered important lease measures to reduce future emissions. This lease obligation is distinct from the requirement of further CEQA or NEPA mitigation measures to address impacts of potential subsequent discretionary Project approvals.

MM AQ-22: Periodic Review of New Technology and Regulations.

The Port shall require the Berth 97-109 tenant to review, in terms of feasibility, 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 Berth 97-109 property. 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. Over the course of the lease, the tenant and the Port shall work together to identify potential new technology. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility.

As partial consideration for the Port agreement to issue the permit to the tenant, the tenant shall implement not less frequently than once every 7 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.

MM AQ-23: Throughput Tracking.

If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emissions sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions exceed those in the EIS/EIR, then new or additional mitigations would be applied through MM AQ-22.

MM AQ-24: General Mitigation Measure.

For any of the above mitigation measures (MM AQ-9 through AQ-21), 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.

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 AQ-9 through AQ-24 which substantially lessen significant toxic air emissions, as shown in Table 8. Although reduced as a result of the mitigation measures, ambient air concentrations emissions remain significant and unavoidable residential health risk.

Table 8.1. Maximum Health Impacts Associated With The Proposed Project Without Mitigation 2004-2073					
Health Impact	Receptor Type	Maximum Predicted Impact			Significance Threshold
		Proposed Project	CEQA Baseline	CEQA Increment	
Cancer Risk	Residential	99×10^{-6} (99 in a million)	14×10^{-6} (14 in a million)	85×10^{-6} (85 in a million)	10 × 10 ⁻⁶ 10 in a million
	Occupational	71×10^{-6} (71 in a million)	11×10^{-6} (11 in a million)	61×10^{-6} (61 in a million)	
	Sensitive	53×10^{-6} (53 in a million)	2.3×10^{-6} (2.3 in a million)	50×10^{-6} (50 in a million)	
	Student	1.5×10^{-6} (1.5 in a million)	0.1×10^{-6} (0.1 in a million)	1.4×10^{-6} (1.4 in a million)	
	Recreational	93×10^{-6} (93 in a million)	18×10^{-6} (18 in a million)	83×10^{-6} (83 in a million)	
Chronic Hazard Index	Residential	0.23	0.14	0.1	1
	Occupational	0.71	0.43	0.42	
	Sensitive	0.08	0.02	0.05	
	Student	0.08	0.02	0.05	
	Recreational	0.61	0.43	0.39	
Acute Hazard Index	Residential	1.31	0.13	1.29	1
	Occupational	2.05	0.22	2.03	
	Sensitive	1.1	0.04	1.06	
	Student	1.1	0.04	1.06	
	Recreational	1.58	0.22	1.54	
a) Exceedances of the significance criteria are in bold . The significance thresholds apply to the CEQA and NEPA increments only. b) 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 impact. The example given in the text, before the CEQA Impact Determination, illustrates how the increments are calculated.					

Table 8.2 Maximum Health Impacts Associated With The Proposed Project With Mitigation, 2004-2073					
Health Impact	Receptor Type	Maximum Predicted Impact			Significance Threshold
		Proposed Project	CEQA Baseline	CEQA Increment	
Cancer Risk	Residential	19×10^{-6} (19 in a million)	14×10^{-6} (14 in a million)	11×10^{-6} (11 in a million)	10×10^{-6} 10 in a million
	Occupational	13×10^{-6} (13 in a million)	11×10^{-6} (11 in a million)	13×10^{-6} (13 in a million)	
	Sensitive	8.9×10^{-6} (8.9 in a million)	2.3×10^{-6} (2.3 in a million)	6.6×10^{-6} (6.6 in a million)	
	Student	0.2×10^{-6} (0.2 in a million)	0.1×10^{-6} (0.1 in a million)	0.2×10^{-6} (0.2 in a million)	
	Recreational	20×10^{-6} (20 in a million)	18×10^{-6} (18 in a million)	20×10^{-6} (20 in a million)	
Chronic Hazard Index	Residential	0.18	0.14	0.06	1
	Occupational	0.59	0.43	0.32	
	Sensitive	0.05	0.02	0.03	
	Student	0.05	0.02	0.03	
	Recreational	0.5	0.43	0.28	
Acute Hazard Index	Residential	1.11	0.13	1.09	1
	Occupational	1.7	0.22	1.68	
	Sensitive	0.95	0.04	0.91	
	Student	0.95	0.04	0.91	
	Recreational	1.43	0.22	1.4	
<p>a) Exceedances of the significance criteria are in bold. The significance thresholds apply to the CEQA and NEPA increments only.</p> <p>b) 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 impact. The example given in the text, before the CEQA Impact Determination, illustrates how the increments are calculated.</p> <p>c) Construction emissions were modeled with the operational emissions during the periods where construction emissions overlap with operations.</p>					

With mitigation, health risk impacts for cancer acute health risk are significant for the following receptors: residential, occupational and recreational receptors. The main reason why impacts remain significant is that Phase I construction and operations have already occurred but are being reanalyzed in compliance with the ASJ. Therefore, mitigation cannot be applied to further reduce these existing emissions. Table 9 presents results of the 2009-2078 HRA. The results are provided for information purposes only and were not used to determine significance. However, the 2009-2078 HRA results indicate that the mitigation measures imposed by the Port starting in 2009 would reduce the maximum residential cancer risk to less than 10 per million for the CEQA increments. The CEQA

cancer risk increments for occupational and recreational receptors would remain at or above the threshold.

Table 9. Maximum Health Impacts Associated with the Proposed Project with Mitigation, 2009-2078					
Health Impact	Receptor Type	Maximum Predicted Impact			Significance Threshold
		Proposed Project	CEQA Baseline	CEQA Increment	
Cancer Risk	Residential	9.3×10^{-6} (9.3 in a million)	14×10^{-6} (14 in a million)	7.5×10^{-6} (7.5 in a million)	10×10^{-6} 10 in a million
	Occupational	10×10^{-6} (10 in a million)	11×10^{-6} (11 in a million)	10×10^{-6} (10 in a million)	
	Sensitive	5.7×10^{-6} (5.7 in a million)	2.3×10^{-6} (2.3 in a million)	4.3×10^{-6} (4.3 in a million)	
	Student	0.2×10^{-6} (0.2 in a million)	0.1×10^{-6} (0.1 in a million)	0.1×10^{-6} (0.1 in a million)	
	Recreational	15×10^{-6} (15 in a million)	18×10^{-6} (18 in a million)	14×10^{-6} (14 in a million)	
<p>a) The 2009-2078 HRA is for informational purposes only. It shows the risks that would occur over a 70-year exposure period starting in 2009, the first year that the Port is able to implement a wide array of mitigation measures.</p> <p>b) Exceedances of the significance criteria are in bold. The significance thresholds apply to the CEQA and NEPA increments only.</p> <p>c) 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 impact. The example given in the text, before the CEQA Impact Determination, illustrates how the increments are calculated.</p>					

The Final EIR has accelerated implementation and/or modified of some mitigation measures proposed in the Recirculated Draft EIS/EIR, namely MM AQ-11 (low sulfur fuel), MMAQ-17 (yard equipment) and MM AQ-21 (truck idling), to further reduce operational emissions. In regards to low sulfur fuel, the new requirements call all (100%) of ships to use low sulfur fuel (0.2%) from day one of operation unless there are technical issues, thereby increasing low sulfur fuel requirements for beyond the Recirculated Draft EIS/EIR requirements. In response to a number of comments received on electric yard tractors, a pilot project was included in MM AQ-17. In addition, MM AQ-21 was amended to clarify restrictions on truck idling. The net effect of the revised assumptions/mitigation measures would reduce mitigated operational emissions compared to the uncorrected values. However, because the new requirements capture a yet to be determined number of ships, the revised mitigated operational emissions are assumed to still exceed the CEQA emissions thresholds. Therefore, the revisions to operational assumptions/mitigation measures used in the Draft Recirculated EIS/EIR that are included in the Final EIS/EIR were not evaluated for precise quantification of their potential to reduce emissions from proposed operational activities.

Mitigation measures AQ-9 through AQ-24 represent feasible means to reduce air pollution impacts from proposed operational sources

Public Comment

Measures to reduce both construction and operational air emissions would reduce health risk as well. Therefore, the comments received as part of Impact AQ-1 and Impact AQ-3 also pertain to Impact AQ-7. As discussed in Impact AQ-1 above, a number of comments in regards to construction emissions were received on the Recirculated Draft EIS/EIR from the US Environmental Protection Agency (USEPA, comment 1-24), South Coast Air Quality Management District (AQMD, comments 10-5, 10-6, and 10-15), the Natural Resources Defense Council (NRDC, comments 16-18, 16-19 and 16-20) and the NWSPNC (comments, 23-7 and 23-10). The comments requested additional controls for construction trucks and other equipment, to lengthen the construction schedule and a post-project validation system.

As discussed under Impact AQ-3 above, thirty-five comments were received on the Recirculated Draft EIS/EIR in regards to further mitigation to reduce operational air emissions. Comments were received from USEPA (1-10) AQMD (comments 10-8, 10-9, 10-11, 10-12, 10-13, 10-14 and 10-15), NRDC (comments 15-6, 15-7, 16-5, 16-7, 16-8, 16-9, 16-11, 16-12, 16-14, 16-15, 16-47 16-58), the PCAC Air Quality Subcommittee (PCAQ-AQ, comments 20-2, 20-3, 20-4, 20-8 and 20-10), the PCAC Past EIR Subcommittee (PCAC EIR, comment 21-8), the Central San Pedro Neighborhood Council (CSPNC, comment 22-3), NWSPNC (comment 23-8, and 23-9) and CSE (comments 25-14 and 25-15). Comments requested increased ship requirements including AMP, slide valves, and new technology, increased rail and truck requirements, an annual scorecard, changes in operation, offset programs, and alternative rail transport systems.

The feasibility discussions in Impact AQ-1 and Impact AQ-3 also apply to Impact AQ-7.

In addition to the above mentioned comments on Impacts AQ-1 and AQ-3, one comment was received from the NWSPNC (23-9) in regards to Impact AQ-7. Specifically, the NWSPNC requested that the Port develop an offset program to address health risk impacts. In this EIS/EIR, all measures determined by the Port to be feasible for the proposed Project are prescribed as mitigation. It is the intention of the Port to directly reduce or eliminate the source of emissions. In addition, **MM AQ-22** provides a process to consider new or alternative emission control technologies at regular intervals during the lease and an implementation strategy to ensure compliance. Under **MM AQ-22**, the opportunity to add new measures to the lease would occur at least every 7 years.

Regarding the comment to provide offset mitigation, that mitigation be applied to sources other than the Project, CEQA does not authorize the imposition of mitigation in the context of this EIS/EIR for the purpose of reducing or avoiding impacts that are not directly or indirectly attributable to the proposed Project. Such impacts are being addressed by the Port outside the NEPA/CEQA process, through implementation of CAAP, the recently agreed Memorandum of Understanding (MOU). Through the MOU, the Port has agreed to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by Port operations outside of the context of project-specific NEPA and/or 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 terminal up to an amount of approximately \$4 million. The off-Port community benefits of the MOU are designed to offset overall effects of existing Port operations.

Impact AQ-9: The proposed Project would produce GHG emissions that would exceed CEQA 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 (2001). 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% 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 rip-rap and 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

As shown in Table 10 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, MMs AQ-9, 10, 17, 20 and AQ-21 (listed previously), and AQ-25 through AQ-30 are identified as reducing GHG emissions from construction and operation, as shown in Table 9. 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 further shown in Table 9, 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-25: LEED

The main terminal building shall obtain the Leadership in Energy and Environmental Design (LEED) gold certification level.

MM AQ-26: Compact Fluorescent Light Bulbs

All interior buildings on the premises shall exclusively use compact fluorescent light bulbs for ambient lighting within all terminal buildings. The tenant shall also maintain and replace any Port-supplied compact fluorescent light bulbs.

MM AQ-27: Energy Audit

The tenant shall conduct a third party energy audit every 5 years and install innovative power saving technology where feasible, such as power factor correction systems and lighting power regulators. Such systems help to maximize usable electric current and eliminate wasted electricity, thereby lowering overall electricity use.

MM AQ-28: Solar Panels

The applicant shall install solar panels on the main terminal building.

MM AQ-29: Recycling

The tenant shall ensure a minimum of 40 percent of all waste generated in all terminal buildings is recycled by 2012 and 60 percent of all waste generated in all terminal buildings is recycled by 2015. 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.

MM AQ-30: 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.

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. As shown below in Table 9, GHG emissions are significant and unavoidable for all Project years.

Table 10.1 Annual Operational GHG Emissions – Unmitigated Proposed Project

Project Scenario/ Source Type	Metric Tons Per Year						
	CO ₂	CH ₄	N ₂ O	HFC-125	HFC-134a	HFC-143a	CO ₂ e
Total For Project Year 2005	175,884	12.8	3.8	0.07	0.17	0.09	178,080
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	173,451	12.0	3.8	0.07	0.17	0.09	175,622
Total For Project Year 2015	542,949	33.7	11.4	0.21	0.49	0.25	549,338
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	540,516	33.0	11.4	0.21	0.49	0.25	546,881
Total Project Year 2030	675,681	41.0	13.7	0.28	0.65	0.33	683,656
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	673,248	40.3	13.7	0.28	0.65	0.33	681,199
Total Project Year 2045	675,923	41.0	13.7	0.28	0.65	0.33	683,901
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	673,490	40.3	13.7	0.28	0.65	0.33	681,444

Notes: One metric ton equals 1,000 kilograms, 2205 lbs, or 1.1 U.S. (short) tons.

CO₂e = the carbon dioxide equivalent emissions of all GHGs combined. The carbon dioxide equivalent emission rate for each GHG represents the emission rate multiplied by its global warming potential (GWP). The GWPs are 1 for CO₂; 21 for CH₄; 310 for N₂O; 2800 for HFC-125; 1,300 for HFC-134a; and 3,800 for HFC-143a.

Table 10.2. Annual Operational GHG Emissions – Mitigated Proposed Project

Project Scenario/ Source Type	Metric Tons Per Year						
	CO ₂	CH ₄	N ₂ O	HFC-125	HFC-134a	HFC-143a	CO ₂ e
Total For Project Year 2005	177,191	31.5	3.9	0.07	0.17	0.09	179,800
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	174,757	30.7	3.9	0.07	0.17	0.09	177,343
Total For Project Year 2015	303,139	475.5	12.3	0.21	0.49	0.25	319,097
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	300,706	474.7	12.3	0.21	0.49	0.25	316,640
Total Project Year 2030	276,644	784.6	12.3	0.3	0.7	0.3	299,800
CEQA Baseline	2,433	0.8	0.0	0.0	0.0	0.0	2,457
Project Minus CEQA Baseline	274,211	784	12	0	1	0	297,343
Total Project Year 2045	276,702	785	12	0.3	0.7	0.3	299,859
CEQA Baseline	2,433	0.8	0	0	0	0	2,457
Project Minus CEQA Baseline	274,268	784	12.3	0.3	0.7	0.3	297,401

Notes:

- 1 metric ton equals 1,000 kilograms, 2205 lbs, or 1.1 U.S. (short) tons.
- CO₂e = the carbon dioxide equivalent emissions of all GHGs combined. The carbon dioxide equivalent emission rate for each GHG represents the emission rate multiplied by its global warming potential (GWP). The GWPs are 1 for CO₂; 21 for CH₄; 310 for N₂O; 2,800 for HFC-125; 1,300 for HFC-134a; and 3,800 for HFC-143a.

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 emissions 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 MM AQ-9, AQ-10, AQ-17 and AQ-20 (listed previously), and AQ-25 through AQ-30, which lessen significant GHG emissions. The Final EIR has modified MM AQ-17 to further reduce GHG emissions. However, as shown above, 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 Recirculated Draft EIS/EIR.

Public Comment

Measures to reduce operational air emissions would reduce GHG emissions as well. Therefore, the some of the comments received as part of Impact AQ-3 also pertain to Impact AQ-7. As discussed under Impact AQ-3 above, thirty-five comments were received on the Recirculated Draft EIS/EIR in regards to further mitigation to reduce operational air emissions. Comments were received from USEPA (1-10) AQMD (comments 10-8, 10-9, 10-11, 10-12, 10-13, 10-14 and 10-15), NRDC (comments 15-6, 15-7, 16-5, 16-7, 16-8, 16-9, 16-11, 16-12, 16-14, 16-15, 16-47 16-58), the PCAC Air Quality Subcommittee (PCAQ-AQ, comments 20-2, 20-3, 20-4, 20-8 and 20-10), the PCAC Past EIR Subcommittee (PCAC EIR, comment 21-8), the Central San Pedro Neighborhood Council (CSPNC, comment 22-3), NWSPNC (comment 23-8, and 23-9) and CSE (comments 25-14 and 25-15). Comments requested increased ship requirements including AMP, slide valves, and new technology, increased rail and truck requirements, an annual scorecard, changes in operation, offset programs, and alternative rail transport systems.

The feasibility discussions in regard to mitigation proposed in comments for Impact AQ-3 also apply to mitigation proposed in comments for Impact AQ-7.

Regarding GHG mitigation measures specifically, comments were received on the Recirculated Draft EIS/EIR from the NRDC (16-28 through 16-49) and CSE (25-9). Comments were largely focused on adding additional measures to reduce GHG through the use of new technology, including alternative rail systems, truck and tugboat measures, regenerative braking technology, intelligent container design and solar panels.

Alternative Rail Systems

In regards to the comments regarding alternative rail systems (NRDC 16-33 and 16-34; and CSE 25-9), the implementation of large-scale transportation systems at the ports, such as Maglev, is not feasible for consideration as mitigation for the impacts of the proposed Project. These systems generally require very large capital investments, have extensive geographical coverage, and are disproportionate to the impacts of an individual project. Additionally, the project applicant has no means to implement such system-wide transportation improvements. The recommendations of alternative transportation systems are better implemented on a Port-wide or regional basis. The Clean Truck Program at the Port is an example of a large-scale transportation system that currently is being implemented on a Port-wide basis. However, transportation systems for cargo movement such as Maglev represent an infrastructure system over which the Port has no jurisdiction or ability to control. Due to the complexity and cost of implementing new low-emission technologies, such as Maglev, LIM-rail, or electric dual-mode trams, development and implementation of these technologies are only feasibly handled on a Port-wide or regional basis. The CAAP TAP is a process to achieve this objective.

Truck Measures

In regards to recommendations to reduce truck emissions (NRDC, comments 16-37 through 16-44), the Port has a number of programs in place. The Port has reduced truck-idling emissions through operational changes such as PierPASS, which uses financial disincentives to divert peak-period truck traffic to off-peak hours, thereby reducing long wait times on the terminals. Gate modifications and appointment systems on various terminals at the Port have further reduced idling times. Implementation of the Clean Truck Program will reduce idling emissions by modernizing the truck fleet and requiring regular truck maintenance. MM AQ-19 incorporates the Port Clean Truck Program into the China Shipping Terminal. The Clean Truck Program includes replacing older trucks with trucks from model year 2007 or newer and will accomplish many of the suggested measures including improved aerodynamics and a driver training program. Other measures, such as automatic tire inflation systems, single wide-base tires, weight reduction, and low viscosity lubricants, will be considered as part of the Clean Truck Program provided the measures do not conflict with manufacturer specifications or warranties, or with state and federal trucking regulations. However, the Clean Truck Program is being developed on a Port-wide, rather than Project-level, basis. Additionally, as discussed previously, the Port is performing a GHG inventory and will be developing GHG reduction strategies as part of the CAAP.

Tugboat Measures

In regards to recommendations for electric tugs (NRDC 16-45), tugboats at the Port are already being plugged into shoreside auxiliary power when at rest at their home bases (i.e., docking terminals). No feasible technology currently exists for electrifying main propulsion engines on tugboats while they assist ships.

Regenerative Braking Technology

In regards to recommendations for regenerative braking technology in electric cranes (NRDC 16-46), the new China Shipping cranes proposed for Phases II and III would use regenerative braking technology. (Unlike these new cranes, which are equipped with an AC drive and AC hoist motor, the existing China Shipping cranes are DC drive; therefore, they cannot use a regenerative power system). The captured energy would be used to the greatest extent feasible on the terminal. Furthermore, MM AQ-17 would require all RTGs to be electric starting January 1, 2009.

Intelligent Container Design

In regards to recommendations for intelligent container designs (NRDC 16-48), While the Port supports intelligent container design, such mitigation is not feasible on a project-specific level. Containerization is a standardized shipping method. Changing container design would affect the global goods movement chain. Such changes are only feasibly implemented through a larger governing body, such as the state, or directly through shipping consortiums that can implement changes given industry-wide logistical considerations. It should be noted that shipping companies and associated consortiums deal with competition and efficiency issues on a daily basis and are in the best position to identify and implement container design changes within the shipping framework.

Solar Power

In regards to recommendations for increased solar power (NRDC 16-49), The Attorney General reached an agreement with the Port of Los Angeles under which the Port will conduct a comprehensive inventory of port-related greenhouse gases including tracking these emissions from their foreign sources to domestic distribution points throughout the United States (separate of CEQA analyses). In addition, the Port committed to a 10 megawatt Port-wide solar program. Solar panels will be placed throughout the Port. The 10-megawatt solar grid will be used to power electrical sources at the Port roughly equivalent to enough energy to power about 1,000 homes each year. In addition to MM AQ-28, the Port is also developing a comprehensive Climate Change Action Plan to address GHG emissions from Port operations. Through this program, the Port is exploring options for reducing GHG at the Port-wide level, including a solar energy program agreed to with the California Attorney General.

Biological Resources

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

Impact BIO-4b: Operation of the new facilities could substantially disrupt local biological communities.

A remote potential exists for an accidental vessel spill that could harm biological resources in the Harbor or ocean to occur during Project operation. Such a spill would be considered significant. Accidental spills of fuel or other vessel fluids during operation could occur as a result of a vessel collision, although the likelihood is considered remote due to the use of Port Pilots to navigate the Harbor, because of the requirement that vessels travel in the Harbor at slow speeds, and due to the use of tugs to slowly guide vessels to and from the berths. SPCC regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill and neutralize the potential harmful impacts. An SPCC plan and an OSCP would be prepared that would be reviewed and approved by the RWQCB or the CDFG Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC and OSCP plans would detail and implement spill prevention and control measures. However, container shipping vessels hold larger amounts of fuels than construction-related vessels. If an accident occurs and fuels are spilled into Harbor or ocean waters, the fuel could harm biological resources, depending on the extent of the spill. Such a vessel spill would be considered a significant impact due to the potential for harm to biological resources.

Upland spills from terminal operations and new lighting are not expected to result in significant impacts to local biological communities. Accidental spills of pollutants during terminal operations on land would be small because large quantities of such substances would not be used. Furthermore, the site drainage system would include stormceptors or other BMP devices to process site runoff prior to discharge. All new lights would all be low glare lights with reduced light emissions and the amount of light in the proposed Project area would not substantially increase. Most of the new lights would be located away from the edge of the water and this would minimize effects on marine organisms so that biological communities would not be substantially disrupted.

Finding

No mitigation, beyond implementation of measures required under existing regulations, is available to fully mitigate potential impacts related to potential accidental spills from container vessels during project operation. A fuel spill, even though associated with a low probability of occurrence, that was not contained could result in significant and unavoidable impacts.

Rationale for Finding

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

Public Comment

General comments were received on the Recirculated Draft EIS/EIR from CSE (comments 25-19 and 20) regarding additional mitigation in the form of establishing a Wetlands Restoration Mitigation Fund and a Marine Fish Hatchery. Wetlands restoration would not mitigate the effects of accidental spills as there are no wetlands in the proposed Project area. A fish hatchery would also not mitigate for accidental spills as the spills are expected to be localized and cleaned up in compliance with regulations. In addition, as discussed in Section 3.3, the West Basin is not considered a valuable habitat for fish. Therefore, no changes to the Draft EIR are required.

Impact BIO-4c: Operation of the proposed Project in the West Basin has a low potential to introduce non-native species into the Harbor that could substantially disrupt local biological communities.

The amount of ballast water discharged into the West Basin 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. 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. In addition, container ships coming into the Port 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 Port would be unlikely to contain non-native species but is still a possibility. Non-native algal species can also be introduced via vessel hulls. Of particular concern is the introduction of an alga, *Caulerpa taxifolia*. 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, 2006) 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 Los Angeles and Long Beach Harbors in 2000 and *Sargassum filicinum*, discovered in October 2003 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 in the West Basin would result in an increase of 234 vessels per year (compared to the CEQA baseline ships calls of zero), which represents an approximately 8 percent increase in vessel traffic compared to the total number of vessels entering the Port (approximately 2,850 vessels in 2004). Considering, the small discharge of nonlocal 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, which 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 mitigation, beyond implementation of measures required under existing regulations, is available to fully mitigate the potential introduction of non-native species into the Harbor via ballast water or vessel hulls. 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. 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 levels.

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

No public comments were received on the Recirculated Draft EIS/EIR regarding Impact Bio-4c.

Geology

As discussed in Section 3.5 of the EIS/EIR, there would be four significant impacts to geology as a result of the proposed Project relating to ground shaking. As there is no known measure to eliminate the potential effects of ground shaking in an earthquake-prone area, these impacts remain significant and unavoidable.

Impact GEO-1a: Seismic activity along the Palos Verdes Fault zone, or other regional faults, could 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 period (through 2012).

There would be a minor increase in the exposure of people and property to seismic hazards relating to current and future baseline conditions. The Berth 97-109 Container Terminal lies in the vicinity of the Palos Verdes Fault zone, and traces of the fault pass beneath the Project area. Strong-to-intense ground shaking, surface rupture, and liquefaction could occur in these areas, due to the location of the fault beneath the proposed Project area and the presence of water-saturated hydraulic fill. With the exception of ground rupture, similar seismic impacts could occur due to earthquakes on other regional faults. Earthquake-related hazards, such as liquefaction, ground rupture, ground acceleration, and ground shaking cannot be avoided in the Los Angeles region and in particular in the harbor area where the Palos Verdes Fault is present and hydraulic and alluvial fill is pervasive.

The Los Angeles Building Code, Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, regulates construction in backland areas of the Port. These building codes and criteria provide requirements for construction, grading, excavations, use of fill, and foundation work, including type of materials, design, procedures, etc. These codes are intended to limit the probability of occurrence and the severity of consequences from geological hazards, such as earthquakes. Necessary permits, plan checks, and inspections are also specified. The Los Angeles Municipal Code also incorporates structural seismic requirements of the California Uniform Building Code, which classifies almost all of coastal California (including the proposed Project site) in Seismic Zone 4, on a scale of 1 to 4, with 4 being most severe. The proposed Project engineers would review the proposed Project plans for compliance with the appropriate standards in the building codes.

New terminal construction would be designed per the MOTEMS to protect against seismic hazards that could occur. These regulations have recently been drafted by the CSLC and adopted as state law. LAHD standards and specifications would be applied to the seismic design of the proposed Project. Design objectives for all components of the proposed Project: wharf and backland areas; the two bridges spanning the Southwest Slip; and the relocated Catalina Express Terminal are for them to maintain operation following an Operational level earthquake (OLE) and to survive without collapse and provide public safety following a CLE. At the lower-level OLE, structures are expected to suffer minor, nonstructural damage and resume operations immediately after an earthquake. At the higher Contingency level earthquake (CLE), structural damage is permissible as long as public safety is not jeopardized. However, as discovered during the 1971 San Fernando earthquake and the 1994 Northridge earthquake, existing building codes are often inadequate to completely protect engineered structures from hazards associated with liquefaction, ground rupture, and large ground accelerations. Consequently, designing new facilities based on existing building codes may not prevent significant damage to structures from a major or great earthquake on the underlying Palos Verdes Fault or any other regional fault. In addition, projects in construction phases are especially susceptible to earthquake damage due to temporary conditions, such as temporary slopes and unfinished structures, which are typically not in a condition to withstand intense ground shaking.

Finding

Design and construction in accordance with applicable laws and regulations pertaining to seismically induced ground movement would minimize structural damage in the event of an earthquake. However, increased exposure of people and property during construction to seismic hazards from a major or great earthquake cannot be precluded even with incorporation of modern construction

engineering and safety standards. Therefore, impacts due to seismically induced ground failure would remain significant and unavoidable. 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 levels, as explained below.

Rationale for Finding

Seismic activity along the Palos Verdes Fault zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure. Seismic hazards are common to the Los Angeles region and are not increased by the proposed Project. However, because the proposed Project area is potentially underlain by strands of the active Palos Verdes Fault and liquefaction-prone hydraulic fill, there is a substantial risk of seismic impacts. Future construction of new wharves, buildings, bridges, and related infrastructure would occur over multiple years, thus, increasing exposure of people and property during construction to seismic hazards from a major or great earthquake. Such exposure cannot be precluded, even with incorporation of modern construction engineering and safety standards. Therefore, impacts due to seismically induced ground failure are significant under CEQA.

Public Comment:

No public comments were received on the Recirculated Draft EIS/EIR regarding Impact Geo-1a.

Impact GEO-2a: Construction on the proposed Project in the Port area would expose people and structures to substantial risk involving tsunamis or seiches.

Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches in the proposed Project area and vicinity. Due to the historic occurrence of earthquakes and tsunamis along the Pacific Rim, placement of any development on or near the shore in Southern California, including the proposed Project site, would always involve some measure of risk of impacts from a tsunami or seiche. Although relatively rare, should a large tsunami or seiche occur, it would be expected to cause some amount of property damage and possibly personal injuries to most on or near-shore locations. As a result, this is considered by LAHD as the average, or normal condition for most on- and near-shore locations in Southern California. Therefore, a proposed Project tsunami- or seiche-related impact would be one that would exceed this normal condition and cause substantial damage and/or substantial injuries. For reasons explained below, under a theoretical maximum worst-case scenario, the proposed Project would likely expose people or property to substantial damage or substantial injuries in the event of a tsunami or seiche.

Most recently and more definitively, a model has been developed specifically for the Los Angeles/ Long Beach Port Complex that incorporates consideration of the localized landfill configurations, bathymetric features, and the interaction of the diffraction, reflection, and refraction of tsunami wave propagation, in the predictions of tsunami wave heights. Based on this study, a reasonable worst-case scenario for generation of a tsunami or seiche in the San Pedro Bay Ports predicts tsunami wave heights of 1.3 to 5.3 feet above msl at the proposed Project site, under both earthquake and landslide scenarios. Incorporating the Port msl of +2.8 feet, the model predicts tsunami wave heights of 4.1 to 8.1 feet above MLLW at the proposed Project site. Because Berths 97-109 are approximately 12 feet above msl and would be built to have a 15-foot finished grade and wharf, localized tsunami-induced flooding would not occur.

While the analysis above considers a reasonable worst-case seismic scenario based on a maximum seismic event, with respect to msl, a theoretical maximum worst-case wave action from a tsunami would result if the single highest tide predicted over the next 40 years at the San Pedro Bay Ports was present at the time of the seismic event. The single highest tide predicted over the next 40 years is 7.3 feet above MLLW. This condition is expected to occur less than 1 percent of the time over this 40-year period. If that very rare condition were to coincide with a maximum tsunami event, the model predicts tsunami wave heights of 8.6 to 12.6 feet above MLLW at the proposed Project site. Because the proposed Project site elevation is approximately 12 feet above msl, localized tsunami-induced flooding up to 0.6 foot (about 7 inches) is possible. To determine the extent of potential impacts due to tsunami-induced flooding, Port structural engineers have determined that Port reinforced concrete or steel structures designed to meet California earthquake protocols incorporated into MOTEMS would be expected to survive complete inundation in the event of a tsunami (Los Angeles Harbor Department, 2006). It is possible that infrastructure damage and/or injury to personnel could occur as a result of complete site inundation.

Finding

Emergency planning and coordination between the Terminal operator and Port, as outlined in Mitigation Measure GEO-1, would contribute in reducing injuries to on-site personnel during a tsunami. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into the project that lessen the significant environmental effect identified in the Final EIR. Incorporation of this mitigation measures, however, would not reduce construction geological impacts below the level of significance. However, even with incorporation of emergency planning and construction in accordance with current City and State regulations, substantial damage and/or injury would occur in the event of a tsunami or seiche. While **MM GEO-1** would reduce potential impacts, impacts remain significant and unavoidable.

MM GEO-1: Emergency Response Planning.

The terminal operator shall work with Port engineers and Port police to develop tsunami response training and procedures to assure that construction and operations personnel will be prepared to act in the event of a large seismic event. Such procedures shall include immediate evacuation requirements in the event that a large seismic event is felt at the proposed Project site, as part of overall emergency response planning for the proposed Project.

Such procedures shall be included in any bid specifications for construction or operations personnel, with a copy of such bid specifications to be provided to LAHD, including a completed copy of its operations emergency response plan prior to commencement of construction activities and/or operations.

Rationale for Finding

Designing new facilities based on existing building codes may not prevent substantial damage to structures from coastal flooding. In addition, projects in construction phases are especially susceptible to damage due to temporary conditions, such as unfinished structures, which are typically not in a condition to withstand coastal flooding. Impacts due to tsunamis and seiches are typical for the entire California coastline and would not be increased by construction of the proposed Project. Under the highly unlikely event of the single highest tide predicted over the next 40 years at the San Pedro Bay Ports coinciding with the theoretical maximum worst-case tsunami scenario, there would be a risk of coastal flooding due to tsunamis and seiches. Such exposure cannot be precluded, even

with incorporation of modern construction engineering and safety standards. As a result, impacts during the construction phase would be significant under CEQA.

Public Comment:

No public comments were received on the Recirculated Draft EIS/EIR regarding Impact Geo-2a.

Impact GEO-1b: Seismic activity along the Palos Verdes Fault zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure that would expose people and structures to substantial risk during the operations period (through 2045).

There would be a minor increase in the exposure of people and property to seismic hazards relative to current and future baseline conditions. The Berth 97-109 Container Terminal lies in the vicinity of the Palos Verdes Fault zone, and traces of the fault pass beneath the Project area. Strong-to-intense ground shaking, surface rupture, and liquefaction could occur in these areas, due to the location of the fault beneath the proposed Project area and the presence of water-saturated hydraulic fill. With the exception of ground rupture, similar seismic impacts could occur due to earthquakes on other regional faults. Earthquake-related hazards, such as liquefaction, ground rupture, ground acceleration, and ground shaking cannot be avoided in the Los Angeles region and in particular in the harbor area where the Palos Verdes Fault is present and hydraulic and alluvial fill is pervasive.

The Los Angeles Building Code, Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, regulates construction in backland areas of the Port. These building codes and criteria provide requirements for construction, grading, excavations, use of fill, and foundation work, including type of materials, design, procedures, etc. These codes are intended to limit the probability of occurrence and the severity of consequences from geological hazards, such as earthquakes. Necessary permits, plan checks, and inspections are also specified. The Los Angeles Municipal Code also incorporates structural seismic requirements of the California Uniform Building Code, which classifies almost all of coastal California (including the proposed Project site) within Seismic Zone 4, on a scale of 1 to 4, with 4 being most severe. The proposed Project engineers would review the proposed Project plans for compliance with the appropriate standards in the building codes.

Design objectives for wharf and backland areas and the two bridges are for the proposed Project to remain operational following an OLE and to survive without collapse and provide public safety following a CLE. At the lower-level OLE, structures are expected to suffer minor, nonstructural damage and resume operations immediately after an earthquake. At the higher-level CLE, structural damage is permissible as long as public safety is not jeopardized.

However, as discovered during the 1971 San Fernando earthquake and the 1994 Northridge earthquake, existing building codes are often inadequate to completely protect engineered structures from hazards associated with liquefaction, ground rupture, and large ground accelerations. Consequently, designing new facilities based on existing building codes may not prevent significant damage to structures from a major or great earthquake on the underlying Palos Verdes Fault or any other regional fault.

Finding

Design and construction in accordance with applicable laws and regulations pertaining to seismically induced ground movement would minimize structural damage in the event of an earthquake.

However, increased exposure of people and property during construction to seismic hazards from a major or great earthquake cannot be precluded even with incorporation of modern construction engineering and safety standards. Therefore, impacts due to seismically induced ground failure would remain significant and unavoidable. 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 levels, as explained below.

Rationale for Finding

Seismic activity along the Palos Verdes Fault zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure. Seismic hazards are common to the Los Angeles region and are not increased by the proposed Project. However, because the proposed Project area is potentially underlain by strands of the active Palos Verdes Fault and liquefaction-prone hydraulic fill, there is a substantial risk of seismic impacts. Future construction of new wharves, buildings, bridges, and related infrastructure would occur over multiple years, thus, increasing exposure of people and property during construction to seismic hazards from a major or great earthquake. Such exposure cannot be precluded, even with incorporation of modern construction engineering and safety standards. Therefore, impacts due to seismically induced ground failure are significant under CEQA.

Public Comment:

Two comments were received regarding Impact Geo-2a, one from the SP&PNC (24-13) and one from CSE (25-20). SP&PNC requested public disclosure of increased risk due to port operations and CSE requested increased police and a public evacuation program. In regards to SP&PNC's comments, terminal construction would utilize equipment that is commonly used throughout urbanized and rural areas, and generally do not produce vibrations at levels capable of resulting in structural damage. In addition, the project site is located far enough from surrounding residential land uses for vibrations from Project construction to be unnoticeable due to attenuation. Regarding the recommendation that the Port stabilize all unstable land and hillside retaining walls surrounding the Port, the Project would not result in activities that could result in destabilization of the hillside areas to the west of the Project site, and the recommended measure would thus not provide mitigation for any Project impact. Regarding the comment received from CSE, the Port has an approved Risk Management Plan (RMP) that also includes emergency response and evacuation plans. The Port RMP was written to incorporate issues associated with container terminals in the West Basin. The proposed Project is consistent with the Port's RMP. Also, note that Los Angeles Municipal Code will require the preparation of Project-specific emergency response and evacuation plans.

Evacuation planning for all hazards, man-caused or naturally occurring (such as earthquakes), is a continuing planning effort. Federal, State and local agencies meet and develop planning contingencies, develop communication and logistic protocols and exercise them. As the events may change and conditions become dynamic, the planning teams stage resources, plan exercises and optimize response strategies. Evacuation planning continues between the Port Police, the Los Angeles Fire and Police Departments (LAPD and LAFD), and the California Highway Patrol. LAPD and LAFD have the primary responsibility for evacuation of community areas that are outside the borders of the port complex. Even in these instances, the Port Police may fulfill a support role to ensure coordination and assist with planning, evacuations, and perimeter control. Because of the port's proximity to the community, the port police may be called upon to function as first responders to any incident in or near the complex until a unified command is established to control the scenario. In all occurrences a primary goal of the managing entities is the incident command and control under a

“Unified Command”⁶ approach. Whereas it is appropriate to communicate general emergency preparedness and evacuation planning information to the community in advance, it is not prudent to share detailed tactical plans that are scenario and/or location-based, or contain sensitive security information. However, the City of Los Angeles is committed to protecting its citizens first and foremost in the event of an emergency. Based on the above discussion, no changes to the Final EIR

Impact GEO-2b: Proposed Project operations within the Port area would expose people and structures to substantial risk involving tsunamis or seiches. Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches within the proposed Project area and vicinity.

Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches in the proposed Project area and vicinity. Due to the historic occurrence of earthquakes and tsunamis along the Pacific Rim, placement of any development on or near the shore in Southern California, including the proposed Project site, would always involve some measure of risk of impacts from a tsunami or seiche. Although relatively rare, should a large tsunami or seiche occur, it would be expected to cause some amount of property damage and possibly personal injuries to most on or near-shore locations. As a result, this is considered by LAHD as the average, or normal condition for most on- and near-shore locations in Southern California. Therefore, a proposed Project tsunami- or seiche-related impact would be one that would exceed this normal condition and cause substantial damage and/or substantial injuries. For reasons explained below, under a theoretical maximum worst-case scenario, the proposed Project would likely expose people or property to substantial damage or substantial injuries in the event of a tsunami or seiche.

Most recently and more definitively, a model has been developed specifically for the Los Angeles/ Long Beach Port Complex that incorporates consideration of the localized landfill configurations, bathymetric features, and the interaction of the diffraction, reflection, and refraction of tsunami wave propagation, in the predictions of tsunami wave heights. Based on this study, a reasonable worst-case scenario for generation of a tsunami or seiche in the San Pedro Bay Ports predicts tsunami wave heights of 1.3 to 5.3 feet above msl at the proposed Project site, under both earthquake and landslide scenarios. Incorporating the Port msl of +2.8 feet, the model predicts tsunami wave heights of 4.1 to 8.1 feet above MLLW at the proposed Project site. Because Berths 97-109 are approximately 12 feet above msl and would be built to have a 15-foot finished grade and wharf, localized tsunami-induced flooding would not occur.

While the analysis above considers a reasonable worst-case seismic scenario based on a maximum seismic event, with respect to msl, a theoretical maximum worst-case wave action from a tsunami would result if the single highest tide predicted over the next 40 years at the San Pedro Bay Ports was present at the time of the seismic event. The single highest tide predicted over the next 40 years is 7.3 feet above MLLW. This condition is expected to occur less than 1 percent of the time over this 40-year period. If that very rare condition were to coincide with a maximum tsunami event, the model predicts tsunami wave heights of 8.6 to 12.6 feet above MLLW at the proposed Project site. Because the proposed Project site elevation is approximately 12 feet above msl, localized tsunami-induced flooding up to 0.6 foot (about 7 inches) is possible. To determine the extent of potential

⁶ A Unified Command structure involves establishing a management and command hierarchy that acts upon incident information to develop actionable plans and carries authority need to delegate responders.

impacts due to tsunami-induced flooding, Port structural engineers have determined that Port reinforced concrete or steel structures designed to meet California earthquake protocols incorporated into MOTEMS would be expected to survive complete inundation in the event of a tsunami (Los Angeles Harbor Department, 2006). It is possible that infrastructure damage and/or injury to personnel could occur as a result of complete site inundation.

Finding

Emergency planning and coordination between the Terminal operator and Port, as outlined in Mitigation Measure GEO-1, would contribute in reducing injuries to on-site personnel during a tsunami. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into the project that lessen the significant environmental effect identified in the Final EIR. Incorporation of this mitigation measures, however, would not reduce construction geological impacts below the level of significance. However, even with incorporation of emergency planning and construction in accordance with current City and State regulations, substantial damage and/or injury would occur in the event of a tsunami or seiche. While **MM GEO-1** would reduce potential impacts, impacts remain significant and unavoidable.

MM GEO-1: Emergency Response Planning.

The terminal operator shall work with Port engineers and Port police to develop tsunami response training and procedures to assure that construction and operations personnel will be prepared to act in the event of a large seismic event. Such procedures shall include immediate evacuation requirements in the event that a large seismic event is felt at the proposed Project site, as part of overall emergency response planning for the proposed Project.

Such procedures shall be included in any bid specifications for construction or operations personnel, with a copy of such bid specifications to be provided to LAHD, including a completed copy of its operations emergency response plan prior to commencement of construction activities and/or operations.

Rationale for Finding

Designing new facilities based on existing building codes may not prevent substantial damage to structures from coastal flooding. In addition, projects in construction phases are especially susceptible to damage due to temporary conditions, such as unfinished structures, which are typically not in a condition to withstand coastal flooding. Impacts due to tsunamis and seiches are typical for the entire California coastline and would not be increased by construction of the proposed Project. Under the highly unlikely event of the single highest tide predicted over the next 40 years at the San Pedro Bay Ports coinciding with the theoretical maximum worst-case tsunami scenario, there would be a risk of coastal flooding due to tsunamis and seiches. Such exposure cannot be precluded, even with incorporation of modern construction engineering and safety standards. As a result, impacts during the construction phase would be significant under CEQA.

Public Comment:

No public comments were received on the Recirculated Draft EIS/EIR regarding Impact Geo-2b.

Ground Transportation

As discussed in Section 3.6 of the EIS/EIR, there would be one significant impact in regards to Ground Transportation as a result of the proposed Project during operation. This impact will be significant and unavoidable.

Impact TRANS-5: Proposed Project operations would cause an increase in rail activity, causing delays in regional traffic

Rail activity causes delay at at-grade crossings where the trains pass and cause auto and truck traffic to stop. The amount of delay is related to the length of the train, the speed of the train and the amount of auto and truck traffic that is blocked. The proposed Project would cause an increase in either the number of trains or the amount of auto and truck traffic; however, the increase in auto and truck traffic would only affect some of the at-grade crossings. In the case of this proposed Project, the affected at-grade crossings are at Avalon Boulevard and Henry Ford Avenue. The grade crossing at Fries Avenue would be eliminated as part of the South Wilmington Grade Separation project. The Project will not cause significant rail-related impacts on lines that lead north or east of the downtown rail yards. Rail trips are not controlled by the Port. Currently, the unit trains built at the on-dock and near dock facilities can be picked up by BNSF and/or UP. Both rail companies use the Alameda Corridor to travel to the downtown rail yards. To the east of the downtown rail yards, some of the trains are broken down, reconfigured and otherwise modified at the location of the downtown rail yards from that point to the east. Other trains remain unit trains through the downtown rail yard; there are approximately nine major routes with a number of subroutes that the trains can take to leave the state. The rail operators, and not the Port, make the choice of what routes the trains will take, the day they will move and the time of day the trains will move. Furthermore, the rail mainline tracks were designed and built to accommodate the anticipated rail activity in the region. Rail volumes on the mainline are controlled and limited by the capacity of the mainline itself, thus by definition the project's trains could not traverse the mainline unless it still has remaining capacity. The number of trains generated by the project would not cause the mainline rail tracks to exceed the regional capacity. Once the regional mainline rail track capacity would be exceeded due to increases in regional rail activity, separate environmental studies on the mainline expansion would be undertaken by the rail companies, not by each shipper or carrier generating rail volumes.

Thus, rail-related impacts due to the proposed Project are limited to the at-grade crossings that are located south of the downtown rail yards, and are focused on the at-grade crossings on local lines in and near the Port

Between the proposed Project rail yards and the beginning of the corridor, there are two local grade crossings (Avalon Boulevard and Henry Ford Avenue). The rail impact analysis is based on peak hour vehicle delay at those two affected rail crossings. Although proposed Project operations alone would not result in an additional train during the peak hour on a regular basis, it is possible that the cumulative development of the West Basin (Berths 97-109, Berths 121-131, Berth 136-147) may together result in an added train during the peak hour. Therefore, it is assumed that one additional train would occur during the peak hour. This is a very conservative analysis methodology since the proposed Project itself would not regularly result in a full train added during the peak hour.

An additional train would result in additional vehicle delay at the two crossing locations. The added average vehicle delay would range up to a maximum of 97 seconds per vehicle. Average vehicle delay is the average of all vehicles at the crossing during the assessed timer period. Thus, some vehicles will not experience any delay since they will arrive just as the gate is rising and some will

experience more delay if they arrive just as the gate is coming down at the beginning of the crossing. The average represents all vehicles at the crossing during the time the train passes and the gate is going down, is down and is rising back up. Based on the threshold of significance of 55 seconds of average vehicle delay, the project would have a significant impact at both locations.

Finding

There would be a significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the project. No mitigation is available to fully mitigate the transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings. Impacts, therefore, would be significant 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 levels.

Rationale for Finding

All feasible measures to avoid or lessen the impact to local rail crossings. The Recirculated Draft EIS/EIR identified a potentially significant impact related to vehicle delays at two at-grade crossings in the vicinity of the Port (at Avalon Boulevard and at Henry Ford Avenue). Although these crossings are located close to terminal operations in the Port, neither conveys large numbers of general non-Port-related or background traffic. As an example, the hourly volumes along Avalon Boulevard (two lanes in each direction) at the grade crossings in the a.m. peak hour are projected to range from 145 to 155 vehicles in 2030 depending on the direction, and for Henry Ford Avenue (also two lanes in each direction), would range from 518 to 707 vehicles (or 259 to 353.5 vehicles per lane). During the p.m. peak in 2030, Avalon Boulevard volumes are projected to range from 226 to 262 vehicles, and for Henry Ford Avenue, would range from 483 to 1,103 (or 241.5 to 551.5 per lane) vehicles. Due to proximity to the Port, most of the vehicles would be serving the Port and would not comprise a large portion of background or regional traffic. Low traffic volumes such as these generally do not warrant grade separations because the costs are too high for the benefit received. To illustrate the cost-benefit decision-making, Los Angeles Metro considers at-grade operations to be feasible at volumes up to 800 vehicles per lane (Metro, 2003). Grade separations costs vary depending on various physical constraints, but start close to \$10 million (based on actual costs from prior grade separation projects at the Port of Los Angeles and not assuming the increased costs of materials). Such projects also often take a number of years to be constructed which often results in periodic delays in traffic. For relatively low traffic volumes such as the two at-grade crossings, the costs and potential traffic delays outweigh the potential benefits. In addition, as discussed in the Recirculated Draft EIS/EIR, a number of grade crossings and traffic improvements unrelated to the proposed in the area are expected to further decrease traffic congestion.

Public Comment:

Comments were received from the Public Utilities Commission (PUC, comment 5-2), the City of Riverside (12-14) and the Riverside County Transportation Commission (RCTC, comments 13-12 and 13-14). The PUC requested grade crossings for the two impacted intersections and vandal-resistant fencing. In regards to the grade crossings, please see above discussion; the Port has already examined the feasibility of this recommendation. The recommendation to install vandal-resistant fencing or other access barriers at these crossing locations would not serve as effective mitigation for the identified vehicle delay impacts. Therefore, changes to the Final EIR are not required.

The City of Riverside and the RCTC both requested that the Port implement mitigation measures within Riverside City and County to address impacts from Port truck and rail traffic through this area. Specifically, the comments requested grade separations in Riverside, shifting Port operations to off-peak hours and a direct mitigation fee to support further mitigation in Riverside.

The comments from the City of Riverside and RCTC both suggest that the findings in the Recirculated Draft EIS/EIR are not correct and that the proposed Project would cause significant impacts within Riverside from truck and rail traffic in addition to the two local intersections identified in the Recirculated Draft EIS/EIR. Characterizing congestion in Riverside County as caused by the Ports is incorrect and unsubstantiated. Rather, congestion in Riverside County is predominantly a result of land use planning and growth policies and decisions of the jurisdictions within the county.

Trucks:

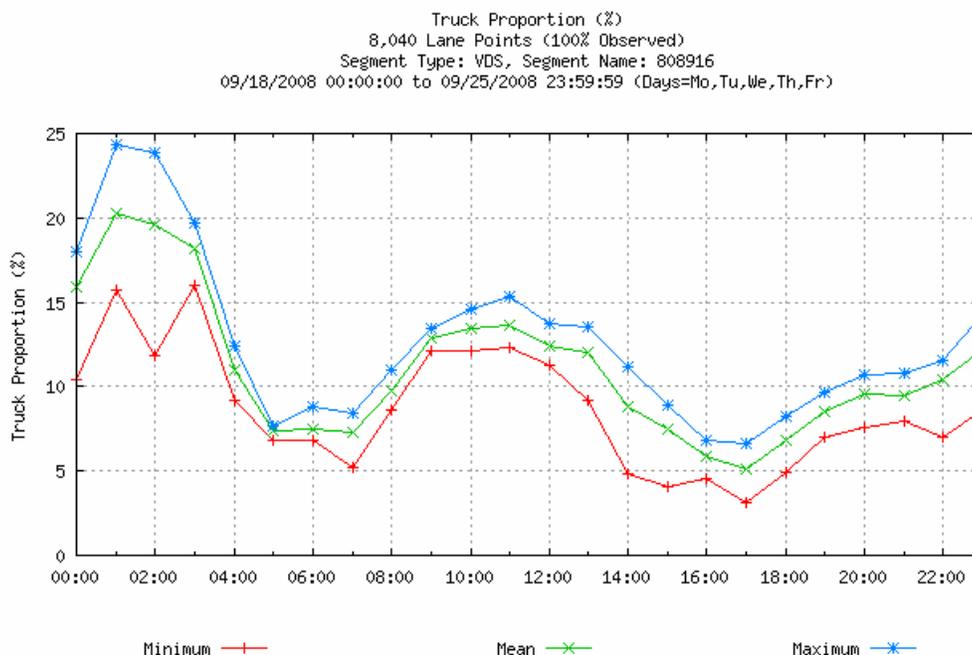
Regarding the suggestion that trucks traveling at slower speeds will lead to a “slow-down of freeway traffic generally, ” if trucks constitute 10 percent of the traffic and those trucks average 10 percent slower speeds than automobiles, then the presence of trucks on freeways can be expected to slow overall traffic speeds by only 1 percent. More importantly, this change in speed will have a negligible impact on overall capacity. A 5-mile per hour (mph) difference in free-flow speed (FFS) translates to a difference of 50 vehicles per hour per lane in the capacity of a freeway, per the Highway Capacity Manual (HCM). A 1 percent difference in average speed would translate to a capacity difference of only 6 vehicles per hour per lane (or 24 vehicles per hour on a four-lane directional freeway). While this might be considered a “general slow-down,” it is not significant.

RCTC asserts that “trucks slowing down and merging leads to congestion and increases the likelihood of accidents.” While most research suggests that speed differentials do have an effect on safety, quantifying these effects due to a specific increase in truck volumes is not possible. Similarly, the congestion impacts of an increase in truck traffic can only be quantified if the exact volume of trucks on a specific freeway is known. Note also that the trucks in question (from Project traffic) are either through-trucks or trucks destined for local land uses (e.g., distribution centers, warehouses, or manufacturing facilities in Riverside County). Through-trucks do not use the ramps in Riverside County (i.e., they do not need to slow down and merge). Based on RCTC data, through trucks are somewhat less than 50 percent of Port trucks in Riverside County (see page 2 of the *Critical Goods Movement Issues Scan for Riverside County*) (Cambridge Systematics, 2006). Furthermore, if trucks traveling on freeways within Riverside County slow down to exit the freeway or merge onto the freeway, it is because they are traveling to and from destinations such as businesses or warehouse facilities within the Inland Empire. These destinations or origins are likely land uses that have been approved by a local jurisdiction, which is required to consider the environmental impacts of its approvals and provide feasible mitigation for any significant impacts.

The statement that “trucks take up 25-30% of valuable freeway space” is without merit. The original source cited in the RCTC comment (<http://www.reason.org/ps324.pdf>) states that

On some of these routes, even though very heavily trafficked by commuters and other light vehicle traffic, trucks constitute over 10 percent of the traffic stream. Considering that a tractor/semitrailer [sic] occupies about 2.5 to 3 times the road space of a light vehicle, trucks often take up 25 to 35 percent of highway capacity in these corridors.

This calculation is not correct. First, while trucks are up to three times longer than passenger vehicles, they do not take up “2.5 to 3 times” more space. The space requirements for all vehicles depend on the size of the vehicle and the gaps between vehicles. The standard traffic engineering reference on this topic is the HCM, which has factors to estimate the amount of capacity (“road space” in the common vernacular) for different vehicle types. On level freeways (which constitute most of the congested freeways in Riverside County), the passenger car equivalent (PCE) factor for trucks is 1.5 (per the HCM). While the word “space” hasn’t been clearly defined, trucks constitute 25 to 30 percent of available freeway capacity only if they constitute 19 to 25 percent of the vehicles on the freeway. As examples, average daily truck percentages in Riverside County range from 6 to 8 percent on SR-91, from 11 to 14 percent on SR-60, 6 to 9 percent on I-15, and 6 to 7 percent on I-215 (Caltrans, USDOT, and FHWA, 2008). During the peak periods, when congestion occurs, the percentages are much lower. For example, on I-15 near SR-60, the graph below shows the reduced truck percentages during the peak periods. The average percentage for trucks at that location is about 9 percent, but the peak average is 5 to 7 percent (Caltrans, 2008).



The comment expresses concern regarding wear and tear of the freeways caused by trucks. However, all vehicular users of the freeways pay taxes applied to fuels, which are used to fund highway maintenance and improvements. Wear and tear from trucks traveling on any section of freeway are treated the same as wear and tear generated by any other vehicle traveling on the freeway, and is not generally regarded as an environmental impact for purposes of CEQA or NEPA analysis. As discussed in the response to Comment 12-14, there are various regional and statewide efforts to address various goods movement issues and fund solutions, and the RCTC has been an integral part of those processes.

Rail

The assertion by the City of Riverside that Project-related rail traffic would cause a significant environmental impacts in the City of Riverside is inconsistent with the conclusions of the Final EIR for the City’s General Plan (City of Riverside, 2007). In that EIR, the City acknowledged that traffic

delays at the at-grade rail crossings would occur under the Plan. However, the City did not identify those delays as potentially significant environmental impacts. In a letter dated September 7, 2007, the Friends of Riverside Hills commented on the Draft EIR, urging that the EIR consider impacts of the City’s growth upon the at-grade crossings and include a study of the present and projected delays at the City’s grade crossings. The City responded to the Friends of Riverside Hills stating the following (City of Riverside, 2007):

In 2003, the City completed the Railroad Grade Separation Report that will help the City prioritize the grade separation projects. The City has identified a total of 28 grade separation projects, listed below. Of the 28 grade separation projects, one project is fully funded, and four are partially funded.

The report will help the City prioritize future grade separations in a comprehensive manner, similar to but on a smaller scale than the Alameda Corridor project . . .”

. . . the General Plan includes Policy CCM-12.3 which calls for the City to “Aggressively pursue grade-separated rail crossings to alleviate traffic congestion and associated air quality and noise impacts.”

Thus, because the City has already studied the impacts of railroad crossings in its 2003 Railroad Grade Separation Report, which was specifically referenced in the Draft PEIR, and has already identified a priority list of grade separation projects, no further analysis is required in the Draft PEIR.

However, although the City’s response acknowledged the role of “expected growth” of the City in contributing to at-grade rail crossing delays, the City did not revise its EIR to provide the requested detailed traffic impact delay analysis at the at-grade crossings. Instead, the City in reliance on the above-quoted statements, declined to make any change to its conclusion that at-grade rail crossings in the City would not be not be significantly impacted or require mitigation.

In addition, the Port conducted a study examining the average vehicle delays in Riverside County from train trips. To summarize the results, a comprehensive set of calculations was completed to assess the impacts of different trains on different roads at different times of day. Based on the adjusted average gate time of 2:59, the results are summarized in Table 11.

Table 11. Projected Average Delay (per vehicle per hour of traffic) at Riverside County Crossings

Lanes ^a	1	1	1	2	2	2
Daily Traffic Volume ^b	1,000	5,000	10,000	15,000	20,000	25,000
Average Delay ^c	4.5	4.9	5.4	5.1	5.4	5.7
Peak Hour Delay ^c	4.6	5.0	5.8	5.4	5.8	6.2

^aNumber of approach lanes per direction
^bVehicles/day
^cSeconds/vehicle
 Source: CH2M HILL calculations

As can be seen in Table 11, based on the average total gate time of 2:59, the average delay (approximately 5 to 6 seconds per vehicle throughout the peak hour) will be below the impact threshold (55 seconds average delay per vehicle per hour of traffic), and significant vehicle delay impacts at the at-grade crossings in Riverside County (and City of Riverside) are not anticipated

(delays at the two local intersections were above the 55 seconds/vehicle). Therefore, no mitigation for such impacts is required.

Regarding the comment that the Port should consider a fair-share contribution to grade separation projects (presumably in the City of Riverside), it should be noted that much of the problems described by the City are being addressed by a partnership of regional and state organizations. Various Southern California counties (including the County of Riverside) comprise the Southern California National Freight Gateway, referred to as the Trade Corridor Improvement Fund (TCIF). During the past 2 years, the following Southern California agencies have worked closely together to develop of list of Tier I and Tier II projects to address various goods movement issues throughout all of the respective counties.

Port of Los Angeles	Riverside County Transportation Agency (to which the City of Riverside belongs)
Port of Long Beach	San Bernardino Associated Governments
Alameda Corridor Transportation Authority	Orange County Transportation Authority
Alameda Corridor East Construction Authority	Los Angeles County METRO
Ventura County Transportation Commission	Southern California Rail Authority
Southern California Association of Governments	

These agencies have submitted numerous applications to the California Transportation Commission for the TCIF funding of individual projects in each county, including grade separation projects. Furthermore, as indicated on page 20 of the Federal Railroad Administration report that the City of Riverside provided, grade separations generally are funded by the State Department of Transportation (Caltrans) or local agencies (FRA, 2006). The FRA report also calls for communities to work with the railroad (in their communities) to determine the most effective methods for addressing at-grade crossing traffic congestion and to minimize costs for grade separations.

Conclusion

Comments were made that on/off-ramp improvements and grade separations could serve as mitigation for Project impacts to freeways in Riverside County. As concluded in the responses to comments in the Final EIS/EIR, the Project will not have a significant impact on transportation in Riverside County, and therefore, no mitigation is required. If a truck uses freeway ramps in Riverside County, the trucks are most likely traveling to and from origins or destination land uses in Riverside County such as warehouses, industrial facilities, and commercial “big box” retailers. Local agencies have approved these facilities and other land uses, for which appropriate CEQA certifications have been made, either at the individual project level or the General Plan level. As discussed above, significant vehicle delay impacts at the at-grade crossings in Riverside County (and City of Riverside) are not anticipated. Nevertheless, in response to the statement that RCTC staff would like to work with the Port to develop and implement appropriate mitigation for impacts, Port would appreciate meeting with RCTC staff to better understand the implementation plans of RCTC grade separation projects and is in the process of setting up such meetings. In addition, it is the understanding of the Port that RCTC and the City of Riverside are implementing various grade-

separation projects to address the impacts associated with land use development and growth in their respective jurisdictions.

Noise

As discussed in Section 3.11 of the EIS/EIR, there would be two significant impacts in regards to Noise as a result of the proposed Project during construction and operation. This impact will be significant and unavoidable.

Impact NOI-1: Construction activities would temporarily and periodically generate noise, which would substantially exceed existing ambient daytime noise levels at sensitive receivers near the Project site

Construction activities would typically last more than 10 days in any 3-month period for all construction phases. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.

The construction associated with Phases I and II of the proposed Project alternative would have the greatest influence on noise levels in the Knoll Hill residential neighborhood. Knoll Hill is the nearest residential neighborhood, but has only one occupied residence. This neighborhood has an unobstructed view and overlooks Berth 100. Phase I construction activities associated with the proposed Project alternative include Bridge 1 construction, wharf construction, and Berth 100 backlands development. These activities would generate typical hourly average construction noise levels of 68 to 72 dBA L_{eq} . When these levels are added to existing background noise levels, the combined noise level would exceed existing ambient noise level by more than 5 dBA and, therefore, would cause a significant impact. Typical hourly average construction noise levels generated by wharf construction with pile driving, backlands development, bridge building, and rock placement during Phase II at the representative sensitive-receiver sites in the Knoll Hill neighborhood would be 70 to 71 dBA L_{eq} . Predicted construction noise levels combined with existing background noise levels would exceed existing ambient noise levels by more than 5 dBA and, therefore, would cause a significant impact. During Phase III construction, Knoll Hill receivers would experience typical hourly average construction noise levels in the range of 68 to 76 dBA L_{eq} . Predicted construction noise levels combined with existing background noise levels would exceed existing ambient noise levels by more than 5 dBA and, therefore, would cause a significant impact.

Phase I construction activities would cause receivers, in the Pacific Avenue neighborhood to experience hourly construction noise levels of 65 and 70 dBA L_{eq} , respectively. These predicted construction noise levels, combined with existing ambient noise levels, would increase noise levels over ambient noise levels by more than 5 dBA and, therefore, would cause a significant impact. For Phase II, receivers in the residential neighborhood near Pacific Avenue would experience hourly construction noise levels in the range of 63 to 72 dBA L_{eq} . These predicted construction noise levels from Phase II development would cause a significant impact due to a 6 to 8 dBA increase over ambient levels at receivers ST-2 and ST-2A, respectively. Most receivers would experience lower construction noise levels than the other receiver sites in the Pacific Avenue neighborhood during Phase III construction of the proposed Project (Southwest Slip backlands development). However, predicted construction noise levels would exceed ambient noise levels for some sensitive-receivers due to the relatively low existing ambient noise level of 56 dBA at that location.

Finding

Construction noise levels for the China Shipping project would cause more than 5-dBA increases over the estimated 2001 ambient noise levels at sensitive receivers in the Knoll Hill and Pacific Avenue neighborhoods. This would be a significant impact. The construction activities involved in the development of the backlands areas would cause significant temporary and periodic noise level increases above existing ambient noise levels in the Knoll Hill and Front Street neighborhoods. The construction activities at Berths 100 and 102 are estimated to approach and exceed the estimated 2001 ambient noise levels. Therefore, under CEQA Impact NOI-1 would be significant. Considering the distances between the construction noise sources and receivers, the standard controls, and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. MM NOI-1 would reduce potential impacts. With implementation of this measure however, construction equipment noise levels generated at the construction sites could substantially exceed existing ambient noise levels. Thus, impacts to sensitive receptors will remain significant even after mitigation. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that lessen the significant environmental effect identified in the Final EIR. Incorporation of this mitigation measure, however, would not reduce noise impacts during construction impacts below the level of significance. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

NOI-1:Construction Limitations

- a) *Construction Hours. Limit construction to the hours of 7:00 a.m. to 9:00 p.m. on weekdays, between 8:00 a.m. and 6:00 p.m. on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.*
- b) *Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).*
- c) *Temporary Noise Barriers. When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) should be located between noise-generating construction activities and sensitive receivers.*
- d) *Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines.*
- e) *Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise-sensitive areas.*
- f) *Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise-sensitive land uses.*
- g) *Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.*
- h) *Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing.*

- i) IHC Hydrohammer. The contractor shall use an IHC Hydrohammer (SC series with sound insulation system) pile driver or equivalent when constructing the berths.*
- j) Reporting. The Port shall clearly post the telephone number where complaints regarding construction-related disturbance can be reported.*

Rationale for Finding

Construction noise levels that would be experienced at sensitive receivers in the Knoll Hill, Pacific Avenue-Channel Street, and the Wilmington neighborhoods were calculated by determining the distance between the noise measurement sites in these areas (Table 12) and where the construction activity would occur. A standard acoustical formula was used to determine the attenuation of construction noise due to a particular distance. All of the construction activities were considered to be stationary or slow-moving noise sources whose noise would decrease by 6 dBA for every doubling of distance between the noise source and noise receiver. Each receiver was assumed to have a clear line-of-sight to the noise sources because most of the sensitive-receiver sites have an unobstructed view of Berths 100 and 102. Tables 12.2 through 12.4 present the predicted construction noise levels experienced at the various sensitive land uses during construction for Phases I, II, and III, respectively, of the proposed Project alternative.

While MM NOI-1 would reduce construction noise, residual impacts would be significant due to the uncertain feasibility of erecting noise barriers at the private property to mitigate construction noise impacts. Also as shown in Table 12, there were significant noise impacts during construction during Phase I. As Phase I has already occurred, there would be no way to mitigate such impacts.

Table 12.1. Short-Term Noise Monitoring Results

Site	Location	Date	Time	L _{max}	L _{min}	Leq
ST-1	East end Knoll Hill at end of Viewland	10/29/02	12:06	68	59	62
		10/29/02	15:45	74	61	64
		10/30/02	9:30	69	59	64
ST-2	Elberon, Summerland, MacArthur intersection, top of slope	10/29/02	16:20	75	61	67
		10/30/02	9:55	73	62	67
ST-2A	Elberon, Summerland, MacArthur intersection, 100 feet back from top of slope	10/30/02	10:10	67	54	58
ST-3	Harbor Occupational Center near Metals Building	10/29/02	16:40	64	54	58
ST-4	End of Cabrillo Avenue at 1130 Cabrillo Avenue	10/30/02	10:45	62	53	57
ST-5	Near 207 West Amar Street	11/06/03	7:05	72	63	67
ST-6	West end of parking lot at Samoan Sea Apartments	11/07/03	7:35	79	60	69
ST-7	48 feet to centerline of C Street at 303 Gulf Street	4/30/2002	15:50	77	54	62
ST-8	57 feet to centerline of Harry Bridges Boulevard	4/30/2002	15:30	87	58	75
ST-9	48 feet to centerline of C Street at Bayview Avenue	4/30/2002	16:10	70	55	60
ST-10	30 feet to centerline of C Street at Hawaiian Avenue	4/30/2002	16:30	74	60	65
ST-11	Northwest corner of Gulf Avenue and D Street	4/30/2002	16:50	66	54	58

Notes:

L_{max} is the maximum sound level.

L_{min} is the minimum sound level.

Source: Illingworth & Rodkin, Inc., 2003; Entech Northwest, 2003

Table 12.2. Hourly Average Construction Noise Levels at Sensitive Receivers for the Proposed Project (Phase I)^a

Receiver	Ambient Noise Level L _{eq} (dBA)	Proposed Phase I L _{eq} (dBA)	Combined Noise Level (dBA)	Increase over Ambient (dBA)	Significance Criteria (dBA)	Significant Impact?
Knoll Hill Neighborhood						
ST-1	63	72	73	10	5	Yes
ST-3	57	68	68	11	5	Yes
Pacific Avenue-Channel Street Neighborhood						
ST-2	66	68	70	4	5	No
ST-2A ^b	57	59	61	4	5	No
ST-4	56	65	66	10	5	Yes
ST-5	66	70	71	5	5	Yes
ST-6	68	70	72	4	5	No

^aConstruction noise levels at sensitive-receiver sites do not include noise from other existing background sources.
^bTop of slope provides shielding resulting in a 9-dBA reduction in noise.

Table 12.3. Hourly Average Construction Noise Levels at Sensitive Receivers for the Proposed Project (Phase II) a

Receiver	Ambient Noise Level L _{eq} (dBA)	Proposed Phase II L _{eq} (dBA)	Combined Noise Level (dBA)	Increase over Ambient (dBA)	Significance Criteria (dBA)	Significant Impact?
Knoll Hill Neighborhood						
ST-1	63	71	72	9	5	Yes
ST-3	57	69	69	13	5	Yes
Pacific Avenue-Channel Street Neighborhood						
ST-2	66	71	72	6	5	Yes
ST-2A ^b	57	61	62	5	5	Yes
ST-4	56	64	65	9	5	Yes
ST-5	66	61	67	1	5	No
ST-6	68	61	69	1	5	No

^aConstruction noise levels at sensitive-receiver sites do not include noise from other existing background sources.
^bTop of Slope provides shielding resulting in a 9-dBA reduction in noise.

Table 12.4. Hourly Average Construction Noise Levels at Sensitive Receivers for the Proposed Project (Phase III) a

Receiver	Ambient Noise Level L _{eq} (dBA)	Proposed Phase III L _{eq} (dBA)	Combined Noise Level (dBA)	Increase over Ambient (dBA)	Significance Criteria (dBA)	Significant Impact?
Knoll Hill Neighborhood						
ST-1	63	76	76	13	5	Yes
ST-3	57	68	68	11	5	Yes
Pacific Avenue-Channel Street Neighborhood						
ST-2	66	67	70	4	5	No
ST-2A ^b	57	58	61	4	5	No
ST-4	56	61	62	6	5	Yes
ST-5	66	68	70	4	5	No
ST-6	68	69	72	4	5	No

^aConstruction noise levels at sensitive-receiver sites do not include noise from other existing background sources.
^bTop of slope provides shielding resulting in a 9-dBA reduction in noise.

Public Comment

There was one comment received on Impact NOI-1 from the USEPA (1-22). The comment suggested prohibiting louder construction after 6:00 pm on weekdays. The evaluation of construction-related noise impacts in the Recirculated Draft EIS/EIR identifies the hours when noise-producing construction activities are prohibited by local ordinance, and Project construction would comply with the ordinance, as applicable. As a matter of course, construction activities for Port projects typically conclude by 6:00 p.m. Monday through Saturday for safety reasons. A review of past wharf construction logs at Berth 100 shows that pile-driving activity ceased by 6:00 p.m. Therefore, no changes are required in the Final EIR.

Impact NOI-3: Operations would 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.

Operational Noise: Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations, including movement of container ships and assist tugs, at the new wharves. The new Berths 100 and 102 would be located more than 2,500 feet from the Knoll Hill and Front Street and farther from residences located in the Wilmington neighborhood.

Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990. These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, top picks, side picks, and heavy duty vehicles. These pieces of equipment are the same equipment that would be operating at the China Shipping terminal. Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq} .

Finding

Operational noise levels would cause future ambient noise levels to be greater than 5 dBA above the 2001 baseline CNEL at receivers on the east side of Knoll Hill and sensitive receivers located west of Front Street and south of Vincent Thomas Bridge. These receivers would experience a significant noise impact from operations. Therefore, under CEQA Impact NOI-3 would be significant. Considering the distances between the construction noise sources and receivers, the standard controls, and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. **MM NOI-2** would reduce potential impacts. With implementation of this measure however, construction equipment noise levels generated at the construction sites could substantially exceed existing ambient noise levels. Thus, impacts to sensitive receptors will remain significant even after mitigation. Therefore, the Board hereby finds that changes or alterations have been required in, or incorporated into, the project that lessen the

significant environmental effect identified in the Final EIR. Incorporation of this mitigation measure, however, would not reduce noise impacts during construction impacts below the level of significance. Specific economic, legal, social, technological, or other considerations make infeasible additional mitigation measures or project alternatives, however, as explained below.

NOI-2:

Mitigation measures to reduce operational impacts would include installation of noise walls at the project site or residential property lines, if feasible, and/or soundproofing of impacted noise-sensitive structures. The Port would undertake noise monitoring at these residences after China Shipping is operational to determine the actual noise impact and then tailor specific mitigation measures.

Rationale for Finding

Table 13 presents the overall operational noise levels for each sensitive receiver. The hourly onsite noise levels were converted into CNEL to evaluate community noise impacts at those locations where 24-hour noise monitoring data was available.

Table 13 shows that operational noise generated from the proposed Project due to container terminal loading, traffic, and rail operations would be above existing ambient noise levels near Knoll Hill and Front Street neighborhoods. Intermittent Port operational noises may be distinguishable from noise generated by traffic on the Port's perimeter roadways, local street traffic noise, and existing traffic movements within the Port. Assuming 24-hour-per-day continuous operations, the Port-related activities would cause, by themselves, a CNEL in the range of 58 to 69 dBA.

CEQA baseline noise levels range from 61 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Table 3.11-17 shows the overall future noise levels at nearby receivers due to the proposed Project. The overall CNEL from Port onsite operational, traffic and noise under the proposed Project alternative would generate noise levels slightly more than existing ambient noise levels. At LT-1, representing the Knoll Hill area, an increase above baseline of 6 dBA in CNEL would occur. At LT-3, which represents the residential neighborhood west of Front Street and south of Vincent Thomas Bridge, increase in CNEL above baseline would be 7 dBA. These are significant impacts.

Operational noise levels would cause future ambient noise levels to be greater than 5 dBA above the 2001 baseline CNEL at receivers on the east side of Knoll Hill and sensitive receivers located west of Front Street and south of Vincent Thomas Bridge. These receivers would experience a significant noise impact from operations. Residual impacts would be significant due to the uncertain feasibility of erecting noise barriers at the private property to mitigate construction noise impacts (i.e., the Port will pursue erecting noise barriers but will need to get permission from the individual property owners. Noise reductions are not assumed in case permission is not granted). There was no public comment received in regards to Impact NOI-3.

Table 13.1 Operational Noise Levels for Proposed Project (CNEL, dBA)

Receiver	Onsite Operations	Traffic	Railway	Combined Noise Level
Knoll Hill Neighborhood				
LT-1	68	59	46	69
Pacific Avenue/Front Street				
LT-2	65	60	46	66
LT-3	64	64	45	67
Wilmington Neighborhood				
LT-4	55	51	51	58

Table 13.2 CEQA Operational Noise Impacts for Proposed Project (CNEL, dBA)

Receiver	CEQA Baseline	Proposed Project	Overall Noise Level	Increase over CEQA Baseline
Knoll Hill Neighborhood				
LT-1	64	69	70	6
Pacific Avenue/Front Street				
LT-2	71	66	72	1
LT-3	61	67	66	7
Wilmington Neighborhood				
LT-4	70	58	70	-0-

Water Quality

As discussed in Section 3.14 of the EIS/EIR , there would be one significant impact to Water Quality as a result of the proposed Project during operation. This impact remains significant and unavoidable.

Impact WQ-1e: Operation of proposed Project facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Operation of proposed Project facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the California Water Code or cause regulatory standards to be violated in harbor waters because there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility.

Leaching of contaminants such as copper, from anti-fouling paint could cause increased loading in the harbor which is listed as impaired with respect to copper. The leaching of TBT, copper, and zinc from vessel hull coatings may occur as a result of additional vessels docking at the terminal facility. Studies by the U.S. Navy have demonstrated that these metals may contribute to overall concentrations in the water column in Harbors such as Mayport, Florida, Pearl Harbor, Hawaii, and San Diego, California; however, estimated concentrations of metals resulting from hull vessel leachates were in most cases below federal and state water quality criteria. In addition, vessels docking at the terminal facility, while expected to be greater than 25 m in length, are likely constructed of steel-based hulls. In contrast to aluminum hulls, steel hulls are not painted with antifouling paint containing TBT, but are instead coated with a copper-based antifouling paint

(USEPA, 1999). Consequently, potential impacts of slightly increased TBT would likely not be significant. Project-related increases in vessel traffic could result in higher mass loadings of contaminants such as copper that are released from vessel hull antifouling paints. Although the Navy studies indicate that in most cases, metals (copper) leaching from vessel hulls were below federal and state water quality criteria, because portions of the Los Angeles Harbor are impaired with respect to copper, and because there are likely to be differences between the studied Navy fleet and the Project vessel fleet, increased loadings associated with increases in vessel traffic relative to baseline conditions could exacerbate water and sediment quality conditions for copper.

Other potential operational sources of pollutants that could affect water quality in the West Basin include accidental spills on land that enter storm drains, as well as accidental spills or illegal discharges from vessels while in the West Basin. Impacts to water and sediment quality would depend on the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill on land to Harbor waters and sediments would be minimized through existing regulatory controls and are unlikely to occur during the life of the proposed Project. As described in Section 3.8, activities that involve hazardous liquid bulk cargoes at the Port are governed by the Los Angeles Harbor District Risk Management Plan (RMP). This plan provides for a methodology for assessing and considering risk during the siting process for facilities that handle substantial amounts of dangerous cargo, such as liquid bulk facilities. The Release Response Plan prepared in accordance with the Hazardous Material Release Response Plans and Inventory Law (California Health and Safety Code, Chapter 6.95), which is administered by the City of Los Angeles Fire Department (LAFD), also regulates hazardous material activities within the Port. These activities are conducted under the review of a number of agencies and regulations including the RMP, U.S. Coast Guard (USCG), fire department, and state and federal departments of transportation (49 CFR Part 176). These plans ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. In addition, oil spill contingency plans are required to address spill cleanup measures after a spill has occurred.

For the proposed Project, the terminal operator would prepare an SPCC Plan and an OSCP, which would be reviewed and approved by the California Department of Fish and Game Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC Plan would detail and implement spill prevention and control measures to prevent oil spills from reaching navigable waters. The OSCP would identify and plan as necessary for contingency measures that would minimize damage to water quality and provide for restoration to prespill conditions.

As discussed in Section 3.8 (Hazards and Hazardous Materials), only five small hazardous waste spills have occurred since 2000 at the TraPac facility, which is considered representative of terminal operations under the proposed Project due to similarities in terminal type and proximity. The probability of an accident is classified as “periodical” (once every 10 years), based on the Port accident history of containers containing hazardous materials. The increased number of ship calls associated with the proposed Project could contribute to a comparatively higher number of spills compared to baseline conditions. Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from proposed Project-related upland operations are expected to be limited to small volume releases because large quantities of those substances are unlikely to be used, transported, or stored on the site. Although spill events would be addressed according to procedures described in the SPCC, for oceangoing vessels that carry substantial amounts of fuel, an accidental spill could conceivably be large in the event of a catastrophic accident, which, although remote, could result in significant contamination entering the Harbor

The number or severity of illegal discharges, and corresponding changes to water and sediment quality, from increased vessel traffic cannot be quantified because the rate and chemical composition of illegal discharges from commercial vessels are unknown. It is reasonable to assume that increases in the frequency of illegal discharges would be proportional to the change in numbers of ship visits. In this case, loadings from illegal discharges from the proposed Project operations would increase over baseline conditions. However, there is no evidence that illegal discharges from ships presently are causing widespread problems in the Harbor. Over several decades, there has been an improvement in water quality despite an overall increase in ship traffic. In addition, the Port Police are authorized to cite any vessel that is in violation of Port tariffs, including illegal discharges.

Finding

Upland operations associated with the proposed Project would not result in direct discharges of wastes to Harbor waters. However, stormwater runoff from the Project site could contain particulate debris from operation of the Project facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits, SWPPP requirements, and would be subject to treatment via SUSMP devices prior to discharge to Harbor waters. As a consequence, water quality impacts from site runoff would not be significant. However, there is potential for an increase in accidental spills and illegal discharges to Harbor waters due to increased vessel calls at the facility. Leaching of contaminants such as copper, from antifouling paint could also cause increased loading in the Harbor, which is listed as impaired with respect to copper. Therefore, the impact to water quality from in-water vessel spills, potential illegal discharges and pollutant leaching from vessel coatings would be significant under CEQA. Beyond legal requirements, there are no available mitigations to eliminate in-water vessel spills and leaching of contaminants. Specific legal and technological considerations make infeasible additional mitigation measures or project alternatives, as explained below.

Rationale for Finding

Beyond legal requirements, there are no available mitigations to eliminate in-water vessel spills and leaching of contaminants. Public comments were not received in regards to Impact WQ-1e.

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 84 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 84 projects include projects in the Ports of Los Angeles and Long Beach, the City of Long Beach, and the communities of San Pedro, Wilmington, and Carson.

The discussion below identifies cumulatively significant and 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.

Four comments on the Recirculated Draft EIS/EIR were received from NRDC, SP&PNC, CSE and RCTC in regards to Cumulative Air Quality (NRDC, comment 15-9, SP&PNC comment 24-11 and CSE comment 25-17) and Cumulative Ground Transportation impacts (RCTC comment 13-18). The comments from NRDC requested that mitigation for cumulative impacts be consistent with the TraPac MOU. The SP&PNC and CSE both requested public health mitigation programs to address cumulative impacts, and the RCTC requested direct mitigation in Riverside County to address cumulative impacts on delays at rail crossings.

Regarding consistency of mitigation for cumulative impacts with the TraPac MOU: NEPA and CEQA limit 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. By contrast, neither NEPA nor CEQA allow for the mitigation of cumulative impacts above and beyond the cumulatively considerable contribution of a proposed Project. Nevertheless, separate from the NEPA/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 NEPA and/or 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. Nevertheless, the MOU does not alter the legal obligations of the lead agencies under NEPA or CEQA to disclose and evaluate mitigation measures to reduce or avoid significant impacts of the Project. Therefore, no revisions to the document are required by the MOU. The SP&PNC, CSE and RCTC's comments are discussed below in the applicable cumulative impact discussion.

Aesthetics

Cumulative Impact AES-1: The proposed Project would have a demonstrable negative aesthetic effect.

Finding

The proposed Project would not remove or demolish any features that substantially contribute to the valued visual character of the area. The proposed Project would not require grading or development of any area of designated open space. The proposed Project cranes and backland facilities would be consistent with the existing features of the Port landscape region, and would not contrast with the valued landscape features of the area. The only impacts that would occur under this criterion would be an intensification of the level of development on the project site and a minor decrease in views of open water in the West Basin as seen from Knoll Hill and the hillside residential areas. From several viewpoints, the presence of the cranes has the potential to interfere with views, particularly views toward the Vincent Thomas Bridge, a valued landscape feature, and compete with it in the view.

The collective effect of the past and future projects would be to create a cumulatively considerable impact on the views from the surrounding area. Although the proposed Project will not add to this impact in a substantial way because of the minor level of impact that the project would create under the terms of this criterion, it would nonetheless represent a cumulatively considerable contribution to a significant cumulative impact.

Rationale for Finding

The visual changes that would be brought about by the proposed Project would be taking place in the distinctive landscape region created by the Ports of Los Angeles and Long Beach, which collectively constitute one of the largest port complexes in the world. In this area, over the course of the past century, the construction of breakwaters, the dredging of channels, filling for creation of berths and terminals, and construction of the infrastructure required to support Port operations have completely transformed the original natural setting to create a landscape that is highly engineered, nearly entirely altered, and visually dominated by large-scale man-made features. Past, present, and future projects at the Port have and will continue to have demonstrable negative effects related to elimination of natural features, reductions in views from the surrounding area of the open waters of the Port's channels and basins, and an intensification of the level of development that is visible. For example, development of the Pier 400 Container Terminal and Transportation Corridor Project reduced views of open waters in views from hillside areas in San Pedro, and this project and the adjacent Plains All American Oil Marine Terminal Project at Pier 400, increased the concentration of large-scale developed facilities in the Port complex. The result of these past, present, and future changes has been and will continue to be cumulatively considerable and significant.

Mitigation Measure **MM AES-1**, which would provide for landscaping on the perimeter of the Project site along Front Street and which would implement the recommendations of the Northwest Harbor Beautification Plan would partially attenuate the significant cumulative impacts that would occur under this criterion. However, this mitigation measure will not be sufficient to reduce these cumulative impacts of the proposed Project to a level that is less than significant.

This analysis satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109

including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated.

Cumulative Impact AES-2: The proposed Project would affect a recognized or valued view, scenic vista or scenic highway.

Finding

In general, the visual changes associated with the proposed Project will be consistent with the overall Port setting of the Project. The only aspects of the Project that have the potential to create significant aesthetic impacts have to do with the visual relationship between the Project cranes and sensitive views toward the Vincent Thomas Bridge and impacts of the cranes on panoramic views from the hillside residential areas.

The proposed Project would combine with the effects of the cranes at the Evergreen Terminal to create a cumulatively considerable increase in the degradation of the views toward the Vincent Thomas Bridge from the south and southwest from the Main Channel and Ports O' Call. For this reason, the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact on the views toward the Vincent Thomas Bridge from the south and southwest from the Main Channel and Ports O' Call.

Some of the replacement cranes proposed for the Yang Ming terminal could be visible in the views from, the Channel Street residential area, also encompass the 10 cranes that would be installed under this proposed Project. The presence of the proposed Project cranes and the proposed Yang Ming replacement cranes in this view will create a combined effect that further reduces the openness of the existing view from a residential area with a high level of visual sensitivity. As a result, the proposed Project would make a cumulative considerable contribution to a significant cumulative impact.

This analysis satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated.

Rationale for Finding

Perhaps the most highly recognized and valued views in the area near the proposed Project are the views toward the Vincent Thomas Bridge. The Vincent Thomas Bridge is an important landmark in the region, and its visual importance has been recognized by its designation as the official welcoming monument of the City of Los Angeles, and by a recent project that entailed installation of distinctive lighting to outline the bridge's nighttime profile. Past Port projects in the vicinity of the Berth 97-109 Project have had the effect of substantially degrading important views toward the Vincent Thomas Bridge.

Past Port projects at the TraPac and Yang Ming Terminals have entailed installation of cranes that have obstructed views toward the Vincent Thomas Bridge seen from the southbound lanes of the Harbor Freeway. These cranes have had the effect of substantially obstructing views toward the bridge that are seen by the large numbers of travelers on the freeway.

The eight 100-gauge, post-Panamax A-frame cranes at Berths 226-232 (Evergreen) block the views toward the aesthetically important central span of the bridge, which are seen by passengers on boats entering the Port by way of the Main Channel, by viewers at Ports O' Call, and by viewers in hillside parks and residential areas located south of downtown San Pedro. In 2003, two 50-gauge cranes were replaced with two 100-gauge cranes generally similar in dimensions and appearance to the other six cranes. The replacement of the two 50-gauge cranes with 100-gauge cranes has created a small but noticeable increase in the interference with views toward the bridge from the sensitive vantage points to the south and southwest. Additional cranes potentially will be installed at the Evergreen Marine Terminal as a part of the further expansion of the Evergreen Terminal that is now being planned. If additional cranes are installed at the Evergreen Terminal, the degree of interference with views of the bridge from the Main Channel area is likely to increase. The cranes proposed at the Yang Ming Project site as part of potential future expansion are likely to have a relatively small incremental effect on the cumulative impacts on views created by the existing and potential future cranes at the Evergreen Terminal. Given the role of the Vincent Thomas Bridge as a recognized and valued scenic feature and the degree of view blockage created by past, present, and future projects, the impact on views toward the Vincent Thomas Bridge have been cumulatively considerable and significant.

Changing the color of the proposed Project cranes, as required by mitigation measure **MM AES-2** to reduce visual prominence and to reduce the effect on the bridge profile, would reduce the proposed Project's impacts on views toward the Vincent Thomas Bridge but would not reduce these impacts to a level that is less than significant. Similarly, application of these measures will not reduce the cumulative impacts of the proposed Project, combined with the impacts of past and future projects to a level that is less than significant.

Implementation of mitigation measure **MM AES-4** (improvements to Plaza Park) would provide a partial offset of the effects of the proposed Project on views from the Main Channel and Ports O' Call by creating improved viewing conditions in an area close to Ports O' Call where there are desirable views toward the Vincent Thomas Bridge and the Main Channel area that would not be adversely affected by the proposed Project. However, although implementation of this mitigation measure will offset the cumulative contribution of the Project to impacts on views toward the Vincent Thomas Bridge from the Main Channel and Ports O' Call areas, these impacts will not be reduced to a level that is less than significant.

In terms of mitigation of the Project's cumulative impacts on the panoramic views from hillside residential areas, mitigation measures **MM AES-2** and **MM AES-3** have been proposed. Implementation of mitigation measure **MM AES-2** (crane color studies), will, to some degree, reduce the cumulative impacts of the Project on views toward the Vincent Thomas Bridge from the hillside areas along Channel Street, and implementation of mitigation measure **MM AES-3** (improvements to the portions of John S. Gibson Boulevard and Pacific Avenue in the vicinity of the intersection with Channel Street) will partially offset cumulative impacts to views across the Port from these hillside areas. However, these mitigation measures will not reduce the cumulative impacts on the panoramic view from this area to a level that is less than significant.

Cumulative Impact AES- 4: The proposed Project would create a cumulatively significant light or glare impact.

Finding

As documented in the Section 3.1.4 of the Recirculated Draft EIS/EIR, the incremental change in ambient lighting conditions that would be brought about by the removal of existing lighting on the

site, and installation of the crane and backland lighting, would not create a substantial change in existing levels of ambient light in sensitive areas in the Project vicinity. The Project-specific impact would be less than significant. In addition, as the analysis in Section 3.1.4 documents, the project 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. Although these measures would minimize and keep the project-level lighting impacts of the proposed Project below significance, lighting from the proposed Project would nevertheless make a cumulatively considerable contribution to a significant cumulative impact.

This analysis satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated.

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 contribution to a significant cumulative impact.

Air Quality

Cumulative Impact AQ-1: Potential for Construction to 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

Cumulative Impact AQ-1 assesses the potential for proposed Project construction along with other cumulative projects to produce a cumulatively considerable 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.

Finding

Emissions from proposed Project Phase I construction would increase relative to CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. Emissions from proposed Project Phase II and III construction would also 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 significant. As a result, without mitigation, emissions from proposed Project construction during Phases I would make a cumulatively considerable contribution to a cumulative significant cumulative impact for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions under CEQA. Emissions from proposed Project construction during Phases II and III would produce cumulatively considerable contributions to a cumulative significant cumulative impact for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions under CEQA.

MM AQ-1 through MM AQ-8 would help reduce construction emissions. After mitigation, Phase I construction emissions would be higher than to CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. Therefore, during Phase I construction, 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.

After mitigation, construction emissions of Phases II and III for the proposed Project would continue to increase relative to CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. Therefore, during construction of Phases II and III, 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.

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 2007 and 2011, 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. **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.

Cumulative Impact AQ-2: Potential for Construction to Produce Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation

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.

Finding

The SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in criteria pollutant concentrations. Project Phases II and III construction emissions would produce offsite impacts that would exceed the SCAQMD ambient thresholds for 1-hour NO₂ and would exceed CEQA baseline levels for PM₁₀ and 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 construction could make cumulatively considerable contributions to significant cumulative ambient NO_x, PM₁₀, and PM_{2.5} levels under CEQA.

Offsite impacts from unmitigated Phase I construction emissions were not evaluated because Phase I construction was completed in 2003 and mitigation was implemented.

MM AQ-1 through MM AQ-8 would help reduce construction emissions. With mitigation, impacts from Phase I construction would exceed the SCAQMD 1-hour NO₂ and 24-hour PM₁₀ ambient thresholds. With mitigation, the emissions for Phase II and Phase III for the proposed Project would have concentrations below SCAQMD concentration thresholds for all pollutants. Nonetheless, construction emission could still make cumulatively considerable (and unavoidable) contributions to significant cumulative ambient NO₂, PM₁₀, and PM_{2.5} levels from concurrent related project construction under CEQA.

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.. **MM AQ-1 through MM AQ-8** would help reduce construction emissions, however would not reduce impacts below significance. 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. Consequently, construction 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}.

Cumulative Impact AQ-3: Potential for Operation to 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

Cumulative Impact AQ-3 assesses the potential for proposed Project operation along with other cumulative projects to produce a cumulatively considerable 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.

Finding

Peak daily emissions from proposed Project operation would increase relative to CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} 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 cumulative significant impact for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions under CEQA.

MM AQ-9 through MM AQ-24 would help reduce operational emissions. After mitigation, peak daily emissions from the proposed Project would still exceed CEQA baseline emissions for VOCs, CO, NO_x, SO_x, PM₁₀, and PM_{2.5} during one or more project analysis years. As a result, after mitigation, emissions from the proposed Project 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.

Rationale for Finding

The other projects would be cumulatively significant if their combined operational emissions would exceed the SCAQMD daily emission thresholds for operations. Because this almost certainly would be the case for all analyzed criteria pollutants, the related projects would result in a significant cumulative air quality criteria pollutant impact. **MM AQ-9 through MM AQ-24** would help reduce operational emissions, however would not reduce impacts below significance.

Cumulative Impact AQ-4: Potential for Operation to Produce Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation

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.

Finding

The SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in concentrations of these pollutants. Project operational emissions would produce offsite impacts that would exceed the SCAQMD ambient thresholds for 1-hour and annual NO₂, 24-hour PM₁₀, and 24-hour 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 produce cumulatively considerable contributions to ambient NO₂, PM₁₀, and PM_{2.5} levels under CEQA.

MM AQ-9 through MM AQ-24 would help reduce operational emissions. With mitigation, impacts from Project operation would continue to exceed the 1-hour and annual NO₂ and 24-hour PM₁₀/PM_{2.5} SCAQMD ambient thresholds. As a result, 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.

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. Consequently, 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}. **MM AQ-9 through MM AQ-24** would help reduce operational emissions, however would not reduce impacts below significance.

Cumulative Impact AQ-6: Potential for Operation to Create Objectionable Odors at the Nearest Sensitive Receptor – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-6 assesses the potential of the proposed Project operation along with other cumulative projects to create objectionable odors at the nearest sensitive receptor.

Finding

Operation of the Project would increase diesel emissions within the Port. Any concurrent emissions-generating activity that occurs near the Project site would add additional air emission burdens to cumulative impacts. As a result, without mitigation, Project operations would result in cumulatively considerable contributions to significant cumulative odor impacts within the Project region under CEQA. Implementation of Project mitigations would reduce odor emissions from operation of the proposed Project.

MM AQ-9 through MM AQ-24 would help reduce operational odor. After mitigation, the proposed Project however, would continue to produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region from operations.

Rationale for Finding

There are temporary and semi-permanent sources of odors within the Port region, including mobile sources powered by diesel and residual fuels and stationary industrial sources, such as petroleum storage tanks. Some individuals may sense that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are

cumulatively significant. **MM AQ-9 through MM AQ-24** would help reduce operational odors, however would not reduce impacts below significance.

Cumulative Impact AQ-7: Exposure of Receptors to Significant Levels of Toxic Air Contaminants (TACs)

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

Finding

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase cancer risks from CEQA baseline levels to above the significance criterion of 10 in a million (10×10^{-6}) risk to offsite residential, occupational, sensitive, and recreational receptors. In addition, proposed Project emissions of TACs would 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 offsite student receptors.

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase acute noncancer effects from CEQA and NEPA baseline levels to above the 1.0 hazard index significance criterion at residential, occupational, sensitive, student, and recreational 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 airborne cancer and noncancer levels at all receptor types under CEQA. While the proposed Project emissions would not have an individually significant impact on chronic noncancer health effects at any receptor type under CEQA, the proposed Project would make a greater than zero, and therefore cumulatively considerable, contribution to cumulatively significant impacts on chronic noncancer health risks.

MM AQ-9 through MM AQ-24 would help reduce TACs. With mitigation, construction and operational emissions of TACs under the proposed Project would increase cancer risks from CEQA baseline levels to above the significance criterion of 10 in a million (10×10^{-6}) risk to offsite residential, occupational, sensitive, and recreational receptors. In addition, emissions of TACs from the proposed Project would 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 offsite student receptors.

With mitigation, construction and operational emissions of TACs from the proposed Project would increase acute noncancer effects from CEQA baseline levels to above the 1.0 hazard index significance criterion at residential, occupational, and recreational receptors in proximity to the Project terminal. Although the increases at 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 noncancer effects in the Project region, the proposed Project would also make a cumulatively considerable and unavoidable contribution to ambient noncancer effects under CEQA at these receptor types. While the mitigated Project emissions would not have an individually significant impact on chronic noncancer health effects at any receptor type under

CEQA, the mitigated Project would make a greater than zero, and therefore cumulatively considerable, contribution to cumulatively significant impacts on chronic noncancer health risks

Levels of toxic air contaminant emissions from Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years with the implementation of the recently approved CAAP and current and future rules adopted by the CARB and USEPA. Specifically, DPM emissions from trucks are anticipated to diminish by approximately 80 percent over the next 5 years with the implementation of the CAAP. 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 Port is in the process of developing a Portwide HRA that will define the cumulative health impacts of Port emissions in proximity to the Port. Although levels of toxic air contaminant 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 airborne cancer and noncancer levels at all receptor types under CEQA.

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 San Pedro Bay Ports Clean Air Action Plan (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 ARB 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-24** would help reduce TACs, however would not reduce impacts below significance

Public Comments

Two public comments were received in regards to Cumulative Impact AQ-7. The SP&PNC recommended adding air filtration systems and establishing health clinics in local areas while CSE recommended establishing a public health mitigation fund. Regarding the recommendations, all feasible mitigation measures at the project level have been identified to minimize the health risks associated with the Project and alternatives, including the contribution of the Project to Cumulative Impact AQ-7. Therefore, changes to the Final EIR are not required. The recommended mitigation

would not substantially reduce or avoid health risk impacts on the physical environment, and so is not appropriate mitigation under CEQA. The Port has previously agreed to establish a Port Community Mitigation Trust Fund geared towards addressing the cumulative off-Port impacts created by Port operations. 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 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 terminal up to an amount of approximately \$4 million. The off-Port community benefits of the MOU are designed to offset cumulative effects of Port operations outside the context of NEPA or CEQA review of individual proposed projects.

Cumulative Impact AQ-9: Potential Contribution to Global Climate Change

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

Finding

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, result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As noted above, CO₂ emissions in California totaled approximately 477.77 million metric tons in year 2003 (CEC, 2006). 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 in Chapter 3.2.

MM AQ-25 through MM AQ-30 would help reduce GHG emissions. With mitigation, however, the proposed Project would continue to produce higher GHG emissions in each future project year, compared to CEQA baseline levels. The way in which CO₂ emissions associated with the proposed Project or alternatives 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 significant contribution to the impact of global climate change when considered with the emissions generated by human activity. Nevertheless, as discussed in Chapter 3.2, 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.

Project GHG emissions would contribute to existing levels and, therefore, would contribute to the causes of global climate change. Considering 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 and project alternatives would produce cumulatively considerable and unavoidable contributions to global climate change under CEQA

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 greenhouse gases (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. **MM AQ-25 through MM AQ-30** would help reduce GHG emissions, however would not reduce impacts below significance

Biological Impacts

Cumulative Impact BIO-1: Cumulative Impacts to Sensitive Species – 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 critical habitat.

Finding

As discussed in Section 3.3.4.3.1 of the Recirculated Draft EIS/EIR, the proposed Project would have less than significant impacts on the California least tern and other special status species under CEQA. The Southwest Slip is not an important foraging habitat for California least tern, and no important foraging habitat for this species occurs elsewhere in the Inner Harbor. The proposed Project would have no impact on critically habitat as a result of construction and operations because no critical habitat is present. Project construction is not expected to affect marine mammals because few marine mammals occur in the Harbor and because any marine mammals that could be present are likely to avoid the construction zone or remain enough of a distance that they would not be affected. Furthermore, the proposed Project would not affect nesting or foraging of the peregrine falcon. Construction activities would result in no loss of individuals or habitat for special status species. Therefore, proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to least terns, peregrine falcons, or marine mammals from in-water noise or construction activities under CEQA.

While the proposed Project would not significantly affect marine mammals through vessel strikes, overall increases in vessel traffic along the Southern California coast 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. While operation of the proposed Project would not significantly affect marine mammals through vessel strikes, mitigation measure **MM BIO-2** would be implemented to minimize the potential for vessel strikes. 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 cumulatively considerable contribution a significant cumulative impact related to vessel strikes under CEQA would remain.

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.

Cumulative Impact BIO-4: Cumulative 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 (e.g., from the introduction of noise, light, or invasive species).

Finding

The small increase in vessel traffic in the Harbor (8 percent) 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. Cumulative effects relative to the introduction of non-native species have the potential to be significant, and the proposed Project could result in a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA.

In addition, there is a remote possibility of an accidental spill from vessels during Project operation. Although remote, due to the large amounts of fuel that is onboard oceangoing vessels, an accidental spill is considered to be a potentially significant impact on biological communities. Therefore, if such an accidental spill occurred, it would represent a cumulatively considerable contribution to a potentially significant cumulative impact.

Mitigation Measure BIO-1 would use existing mitigation credits to offset the loss of 2.54 acres of marine habitat due to filling of the West Basin in accordance with agreements between the Port and regulatory agencies for the proposed. As discussed in Section 3.3.4, implementation of mitigation measure **MM BIO-1** would fully mitigate the impact so that no residual impact would remain. Upon implementation of **MM BIO-1**, the proposed Project would not make a cumulative considerable contribution to a significant cumulative impact related to the loss of marine habitat.

Regarding the cumulatively considerable contribution to the significant cumulative biological resources impact related to the potential introduction of invasive species of the proposed Project, 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 residual contribution to a significant cumulative impact (to biological resources) under CEQA.

Regarding the cumulatively considerable contribution to a potentially significant cumulative biological resources impact from accidental vessel spills during operation of the proposed Project, the terminal operator is required to specifically prepare a Spill Response Plan for inclusion in the required Spill Prevention, Control, and Countermeasure/Oil Spill Contingency Plan (SPCC/OSCP) in the event of a vessel accident that results in a fuel spill. However, the nature of the spill may be such that significant impacts to biological resources may still occur. Consequently, operation of the proposed Project would make a cumulatively considerable residual contribution to a potentially significant cumulative impact related to accidental vessel spills under CEQA.

Rationale for Finding

Cumulative marine terminal projects (e.g., San Pedro Waterfront, Channel Deepening, Evergreen Improvements, Pier 400 Oil Marine Terminal, Ultramar, China Shipping, LAXT Crude Oil, YTI, Yang Ming, Middle Harbor, Piers G & J, Pier T TTI, and Pier S) 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.

As a consequence, past, present, and reasonably foreseeable future projects would result in significant cumulative biological resource impacts related to the introduction of invasive species to Harbor water. In addition, operation of the related projects would result in increased vessel traffic to and from the Port. There is the possibility, although remote, of accidental spills from one or more vessel that conceivably could release enough fuel into ocean waters to result in significant impacts to biological resources. Cumulative impacts to biological resources from vessel spills during operation of the related projects, therefore, are considered to be potentially significant.

Geological Impacts

Cumulative Impact GEO-1: Fault Rupture, Seismic Ground Shaking, Liquefaction, or Other Seismically Induced Ground Failure

Cumulative Impact GEO-1 addresses the degree to which the proposed Project, along with other cumulative projects, places structures and/or infrastructure in danger of substantial damage or exposes people to substantial risk following a seismic event.

Southern California is recognized as one of the most seismically active areas in the United States. The region has been subjected to at least 52 major earthquakes (i.e., of magnitude 6 or greater) since 1796. Earthquakes of magnitude 7.8 or greater occur at the rate of about two or three per 1,000 years, corresponding to a 6 to 9 percent probability in 30 years. Therefore, it is reasonable to expect a strong ground motion seismic event during the lifetime of any proposed project in the region.

Ground motion in the region is generally the result of sudden movements of large blocks of the earth's crust along faults. Numerous active faults in the Los Angeles region are capable of generating earthquake-related hazards, particularly in the Harbor area, where the Palos Verdes Fault is present and hydraulic and alluvial fill are pervasive. Also noteworthy, due to its proximity to the site, is the Newport-Inglewood Fault, which has generated earthquakes of magnitudes ranging from 4.7 to 6.3 Richter scale (LAHD, 1991a). Large events could occur on more distant faults in the general area, but the effects at the cumulative geographic scope would be reduced due to the greater distance. Seismic groundshaking is capable of providing the mechanism for liquefaction, usually in fine-grained, loose to medium dense, saturated sands and silts. The effects of liquefaction may result in structural collapse if total and/or differential settlement of structures occurs on liquefiable soils

Finding

As discussed in Sections 3.5.4.3.1.1 and 3.5.4.3.1.2 of the Recirculated Draft EIS/EIR, the proposed Project would result in significant impacts relative to **Impact GEO-1**, even with incorporation of modern construction engineering and safety standards. The proposed Project would not increase the risk of seismic ground shaking, but it would contribute to the potential for seismically induced ground shaking to result in damage to people and structures, because it would increase the amount of structures and people working at the Port. The proposed Project would make a cumulatively

considerable contribution to a significant cumulative geology impact related to seismic activity under CEQA.

The Port of Los Angeles uses a combination of probabilistic and deterministic seismic hazard assessment for seismic design prior to any construction projects. Structures and infrastructure planned for areas with high liquefaction potential must have installation or improvements comply with regulations to ensure proper construction and consideration for associated hazards. However, even with incorporation of modern construction engineering and safety standards, no mitigation is available that would reduce impacts to less than cumulatively considerable in the event of a major earthquake. Therefore, the proposed Project would result in a cumulatively considerable and unavoidable impact.

Rationale for Finding

Past, present, and reasonably foreseeable future projects (and the proposed Project) would not change the risk of seismic ground shaking. However, past projects have resulted in the backfilling of natural drainages at Port of Los Angeles berths with various undocumented fill materials. In addition, dredged materials from the Harbor area were spread across lower Wilmington from 1905 until 1910 or 1911. In combination with natural soil and groundwater conditions in the area (i.e., unconsolidated, soft, and saturated natural alluvial deposits and naturally occurring shallow groundwater), backfilling of natural drainages and spreading of dredged materials associated with past development at the Port has resulted in conditions with increased potential for liquefaction following seismic ground shaking.

In addition, past development has increased the amount of infrastructure, structural improvements, and the number of people working onsite in the POLA/POLB Harbor area (i.e., the cumulative geographic scope). This past development has placed commercial, industrial and residential structures and their occupants in areas that are susceptible to seismic ground shaking. Thus, these developments have had the effect of increasing the potential for seismic ground shaking to result in damage to people and property.

With the exception of the Channel Deepening Project and the Artificial Reef Project, which do not involve existing or proposed structural engineering or onsite personnel, the present and reasonably foreseeable future projects, would result in increased infrastructure, structure, and number of people working onsite in the cumulative geographic scope, which would expose people and property to substantial seismic risks. As a consequence, a significant cumulative impact would occur.

Cumulative Impact GEO-2: Tsunamis or Seiches

Cumulative Impact GEO-2 addresses the degree to which the proposed Project, along with other cumulative projects, exposes people and structures to substantial risk from local or distant tsunamis or seiches.

Tsunamis are a relatively common natural hazard, although most of the events are small in amplitude and not particularly damaging. As has been shown historically, the potential loss of human life following a seismic event can be great if a large submarine earthquake or landslide occurs that causes a tsunami or seiche that affect a populated area. Abrupt sea level changes associated with tsunamis in the past had a great impact on human life. Tsunamis also have reportedly caused damage to moored vessels within the outer portions of the Los Angeles Harbor. Gasoline from damaged boats have caused a major spill in the Harbor waters and created a fire hazard following a seiche. Currents of up

to 8 knots and a 6-foot rise of water in a few minutes have been observed in the West Basin. For onsite personnel, the risk of tsunami or seiches is a part of any ocean-shore interface, and hence personnel working in the cumulative effects area cannot avoid some risk of exposure. Similarly, berth infrastructure, cargo/containers, and tanker vessels would be subject to some risk of damage as well. Designing new facilities based on existing building codes may not prevent substantial damage to structures from coastal flooding

Finding

Tsunamis and seiches are typical for the entire California coastline and the risks of such events occurring would not be increased by construction or operation of the proposed Project. However, because the proposed Project elevation is located within 10 to 15 feet above MLLW, there is a substantial risk of coastal flooding at the proposed Project site in the event of a tsunami and/or seiche and impacts would be significant. The additional infrastructure, structural improvements, and onsite personnel associated with the proposed Project would contribute to the potential for damage to infrastructure and harm to people. The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact related to a tsunami or seiche under CEQA. **Mitigation Measure GEO-1**, Emergency Response Planning would apply to the proposed Project's contribution. This measure states that the terminal operator shall work with Port of Los Angeles engineers and Port police to develop tsunami response training and procedures to assure that construction and operations personnel will be prepared to act in the event of a large seismic event and/or tsunami warning. Such procedures shall include immediate evacuation requirements in the event that a large seismic event is felt at the proposed Project site, and/or a tsunami warning is given as part of overall emergency response planning for this proposed Project.

Such procedures shall be included in any bid specifications for construction or operations personnel, with a copy of such bid specifications to be provided to LAHD, including a completed copy of its operations emergency response plan prior to commencement of construction activities and/or operations. Emergency planning and coordination between the Terminal operator and LAHD would contribute in reducing injuries to onsite personnel during a tsunami. However, even with incorporation of emergency planning, substantial damage and/or injury could occur in the event of a tsunami or seiche. No mitigation is available that would reduce impacts to a level less than cumulatively significant, or the contribution of the proposed Project to a level less than cumulatively considerable, in the event of a major tsunami. Therefore, the proposed Project and the alternatives would make a cumulatively considerable contribution to a significant cumulative impact related to a tsunami or seiche after mitigation, which is an unavoidable impact.

Rationale for Finding

Past, present, and reasonably foreseeable future projects (and the proposed Project) would not change the risk of tsunamis or seiches. However, past projects have resulted in the backfilling of natural drainages and creation of new low-lying land areas, which are subject to inundation by tsunamis or seiches. In addition, past development has increased the amount of infrastructure, structural improvements, and the number of people working onsite in the POLA/POLB Harbor area. This past development has placed commercial and industrial structures and their occupants in areas that are susceptible to tsunamis and seiches. Thus, these developments have had the effect of increasing the potential for tsunamis and seiches to result in damage to people and property.

With the exception of the Channel Deepening Project and the Artificial Reef Project which do not involve existing or proposed structural engineering or onsite personnel, the present and reasonably

foreseeable future projects, would result in increased infrastructure, structure, and number of people working onsite in the cumulative geographic scope, which would expose people and property to risks related to tsunamis and seiches. As a consequence, a significant cumulative impact would occur.

Ground Transportation

Cumulative Impact TRANS-1: Construction Traffic – Cumulatively Considerable and Unavoidable

Cumulative Impact TRANS-1 represents the potential of the proposed Project along with other cumulative projects to result in a short-term, temporary increase in construction truck and auto traffic. In the case of construction activity impacts, the most important cumulative projects include the project plus the other West Basin projects. To provide a reasonably conservative construction period analysis, it has been assumed that construction of all West Basin terminal construction would occur concurrently. These are the projects tracked by LADOT in terms of generating a sufficient number of trips for analysis and as being permitted for construction and eventual operation. However, none of the other cumulative projects (except the West Basin terminals) would affect the cumulative construction scenario; nor can they be analyzed because they are too speculative. Most construction activity for the remaining cumulative projects would occur outside the project study area. In addition, the timing of construction as well as the number of construction trips is unknown and speculative for the remaining cumulative projects. There would be temporary impacts on the study area roadway system during construction of the proposed Project for Berths 97-109, Berths 121-131 and Berths 136-147 because the construction activities would generate vehicular traffic associated with construction workers' vehicles and trucks delivering equipment and fill material to the site. This site-generated traffic would result in increased traffic volumes on the study area roadways for the duration of the construction period, which would span a period of 2 to 3 years for the various project components.

Finding

Construction-related impacts due to the Berths 97-109 proposed Project presented in Section 3.6.3.3.1.1 of the Recirculated Draft EIS/EIR would not result in a significant circulation system impact during the construction phase. However, because concurrent construction activities would result in a significant cumulative impact to the intersections above, construction of the proposed Project would make a cumulatively considerable contribution to the significant cumulative transportation impact.

As a standard practice, the Port requires contractors to prepare a detailed traffic management plan for Port projects, which includes the following: detour plans, coordination with emergency services and transit providers, coordination with adjacent property owners and tenants, advanced notification of temporary bus stop loss and/or bus line relocation, identify temporary alternative bus routes, advanced notice of temporary parking loss, identify temporary parking replacement or alternative adjacent parking within a reasonable walking distance, use of designated haul routes, use of truck staging areas, observance of hours of operation restrictions and appropriate signing for construction activities. The traffic management plan would be submitted to LAHD for approval before beginning construction. Despite implementation of the traffic management plans, the residual contribution of construction-related traffic from the proposed Project or to the cumulatively significant intersection impacts would remain cumulatively considerable and unavoidable

Rationale for Finding

Past construction activities resulted in short-term, temporary impacts at selected roadway links, intersections and ramps. Construction period traffic handling measures were implemented to mitigate these impacts. Once construction was completed, no further construction traffic impacts occurred.

The construction worker and truck trips were assessed cumulatively for all three West Basin Container Terminals at all study intersections during the a.m. and p.m. peak hours. Thus for the a.m. peak hour there would be an assumed 225 inbound worker trips and 40 truck trips (400 daily truck trips divided into 10-hour work shifts), and during the p.m. peak hour there would be 225 outbound worker trips and 40 truck trips. These truck trips were estimated based on other similar Port construction projects. While construction would likely occur in phases for each of the three West Basin Container Terminals, the construction analysis assumes that construction would occur at all three West Basin Terminals simultaneously to represent a conservative construction analysis. Based on the results of the construction traffic analysis, the cumulative construction scenario would result in significant cumulative circulation system impacts at five study intersections.

- The LOS at the Alameda Street/Anaheim Street intersection would experience a significant traffic impact during the A.M. and P.M. peak hours during the construction phase and the level of Project-related construction traffic would exceed the City of Los Angeles threshold for significant impact.
- The LOS at the Harbor Boulevard/SR-47 Westbound On-Ramp intersection would experience a significant traffic impact during the P.M. peak hour during the construction phase and the level of Project-related construction traffic would exceed the City of Los Angeles threshold for significant impact.
- The LOS at the Harbor Boulevard/Swinford Street/SR-47 Ramps intersection would experience a significant traffic impact during the P.M. peak hour during the construction phase and the level of Project-related construction traffic would exceed the City of Los Angeles threshold for significant impact.
- The LOS at the Figueroa Street/C Street/I-110 Ramp intersection would experience a significant traffic impact for both the A.M. and P.M. peak hours during the construction phase and the level of Project-related construction traffic would exceed the City of Los Angeles threshold for significant impact.
- The LOS at the Broad Avenue/Harry Bridges Boulevard intersection would experience a significant traffic impact during the P.M. peak hour during the construction phase and the level of Project-related construction traffic would exceed the City of Los Angeles threshold for significant impact.

Cumulative Impact TRANS-4: Freeway Congestion – Cumulatively Considerable and Unavoidable

Cumulative Impact TRANS-4 represents the potential of the proposed Project along with other cumulative projects to result in a significant increase in freeway congestion.

Finding

Project-related traffic due to the Berths 97-109 proposed Project presented in Section 3.6.3.3.1.2 would result in a less than cumulatively considerable contribution to freeway congestion. According to the State of California Congestion Management Program (CMP), Traffic Impact Analysis (TIA) Guidelines (Los Angeles Metropolitan Transportation Authority 2004 Congestion Management program for Los Angeles County), a traffic impact analysis is required at the following:

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips during either the a.m. or the p.m. weekday peak hours.
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the a.m. or the p.m. weekday peak hours.

Per CMP guidelines, an increase of 0.02 or more in the V/C ratio with a resulting LOS F is deemed a significant impact.

The closest CMP arterial monitoring station to the proposed Project is Alameda Street/Pacific Coast Highway (PCH). The proposed Project would add 87 and 94 additional trips to the a.m. and p.m. peak hours respectively through this intersection in the 2030 and 2045 scenarios, therefore, CMP system analysis is required at this location. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. The analysis results indicate that the proposed Project would not result in more than a 0.02-increase in the V/C ratio at this location; therefore, there is no CMP system impact.

The results of the analysis indicate that the proposed Project would result in 34 and 39 additional proposed Project trips for the a.m. and p.m. peak hours respectively at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F of the Recirculated Draft EIS/EIR.

However, as discussed above, the cumulative projects (including other Port terminal and non-Port projects) would add traffic to the freeway system and at the CMP monitoring stations. The cumulative traffic would exceed the CMP thresholds and increase V/C ratios by more than 0.02 at the monitoring stations, thus creating significant cumulative impact. Although the proposed Project's trips would not constitute a significant project-level impact, the proposed Project's trips would nonetheless contribute to the total traffic on the freeway system; therefore, the proposed Project would make a cumulatively considerable contribution to the significant cumulative impact under CEQA. There are no feasible mitigation measures available. The proposed [will make a cumulatively considerable contribution to the significant cumulative impact.

Rationale for Findings

Freeway traffic levels have continued to increase in and near the study area due to development activity in San Pedro, Wilmington, Harbor City, and the Southern California region as a whole. Not only has local development resulted in additional freeway traffic on I-110 and SR-47, but also regional increases in traffic have resulted in increased diversion of traffic from other congested facilities such as I-405 to the freeways near the project study area. Historically, traffic volumes on all nearby freeways have increased over the past decade. The cumulative projects would be expected to result in significant impacts on the freeway system in the future as well. The cumulative projects will add traffic to the freeways, some of which are already operating at level of service F, which exceeds the CMP threshold for acceptable operating conditions. Regional improvements are programmed through the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP). The projects that are programmed are intended to mitigate the impacts of cumulative and regional traffic growth, but the extent to which they will mitigate future cumulative impacts on the freeway system within the study area is unknown.

Cumulative Impact TRANS-5: Traffic Delay Due to Increase in Rail Activity – Cumulatively Considerable and Unavoidable

Cumulative Impact TRANS-5 represents the potential of the proposed Project along with other cumulative projects to cause an increase in rail activity, causing delay in traffic.

Finding

An increase in rail activity due to the Berths 97-109 proposed Project would result in additional delay in regional traffic and would make a cumulatively considerable contribution to cumulatively significant impacts at both the Henry Ford Avenue and Avalon Boulevard crossings.

Rail activity causes delay at at-grade crossings where the trains pass and cause auto and truck traffic to stop. The amount of delay is related to the length of the train, the speed of the train and the amount of auto and truck traffic that is blocked. The proposed Project would cause an increase in either the number of trains or the amount of auto and truck traffic; however, the increase in auto and truck traffic would only affect some of the at-grade crossings. In the case of this proposed Project, the affected at-grade crossings are at Avalon Boulevard and Henry Ford Avenue. The grade crossing at Fries Avenue would be eliminated as part of the South Wilmington Grade Separation project.

The proposed Project would not have any significant impact on regional rail corridors north of the proposed Project site since the Alameda Corridor project has been completed. The completion of the corridor has eliminated the regional at-grade rail/highway crossings between the Port and the downtown rail yards; therefore, there would be no change in vehicular delay at any of those crossings due to Project-related rail activity (they are now all grade separated).

The Project will not cause significant rail related impacts on lines that lead north or east of the downtown rail yards. Rail trips are not controlled by the Port. Currently, the unit trains built at the on-dock and near dock facilities can be picked up by BNSF and/or UP. Both rail companies use the Alameda Corridor to travel to the downtown rail yards. To the east of the downtown rail yards, some of the trains are broken down, reconfigured and otherwise modified at the location of the downtown rail yards from that point to the east. Other trains remain unit trains through the downtown rail yard; there are approximately nine major routes with a number of subroutes that the trains can take to leave the State. The rail operators, and not the Port, make the choice of what routes the trains will take, the day they will move and the time of day the trains will move. Furthermore, the rail mainline tracks were designed and built to accommodate the anticipated rail activity in the region. Rail volumes on the mainline are controlled and limited by the capacity of the mainline itself, thus by definition the project's trains could not traverse the mainline unless it still has remaining capacity. The number of trains generated by the project would not cause the mainline rail tracks to exceed the regional capacity. Once the regional mainline rail track capacity would be exceeded due to increases in regional rail activity, separate environmental studies on the mainline expansion would be undertaken by the rail companies, not by each shipper or carrier generating rail volumes. Thus, rail related impacts due to the proposed Project are limited to the at-grade crossings that are located south of the downtown rail yards, and are focused on the at-grade crossings on local lines in and near the Port.

Between the proposed Project rail yards and the beginning of the corridor, there are two local grade crossings (Avalon Boulevard and Henry Ford Avenue). The rail impact analysis is based on peak hour vehicle delay at those two affected rail crossings. Although proposed Project operations alone would not result in an additional train during the peak hour on a regular basis, it is possible that the cumulative development of the West Basin (Berths 97-109, Berths 121-131, Berth 136-147) may

together result in an added train during the peak hour. Therefore, it is assumed that one additional train would occur during the peak hour. This is a very conservative analysis methodology since the proposed Project itself would not regularly result in a full train added during the peak hour.

An additional train would result in additional vehicle delay at the two crossing locations. Vehicular traffic must stop at these crossings and wait while the trains pass by, and the duration of the traffic delay is dependent upon the speed and length of the train. For example, a typical train in the Port is a 28-car train, is approximately 8,760 feet long, and travels at an average speed of about 14 km per hour (9 miles per hour) outside the port. Assuming that the automatic gates at each crossing would close 28 seconds prior to the arrival of a train and that they would open 8 seconds after the train clears the crossing, each train passage would block a given street for 11.7 minutes. These assumptions are based on typical train lengths and speeds that occur in the Port. The severity of impact created by a train blockage depends upon the time of day that the blockage occurs and, correspondingly, the volume of traffic that is affected by the blockage. For example, if a blockage occurs during the peak periods of traffic flow, the resulting delays and the number of stopped vehicles would be greater than if the blockage occurred at a non-peak time. Also, the total amount of delay would be greater at locations with high traffic volumes as compared to low-volume locations because the train crossing would stop more vehicles

For this analysis, the following formula has been used to determine the amount of delay at each crossing for each train passage.

$$Delay = \left(\frac{Tb^2 \times q \times nl}{2 \times 60 \times \left(1 - \frac{q}{25}\right)} \right) \times f$$

Where:

Tb = gate blockage time in minutes

q = average arrival rate in vehicles per minute per lane

f = train frequency in trains per hour

nl = number of lanes

This formula has been applied to the two “public” railroad crossings between the proposed Project and beginning of the corridor (crossings internal to port terminals that do not serve public roadways are not assessed in this study). Since the average arrival rate for vehicles is dependent upon the time of day that the train movement occurs, it has been assumed that the train movements occur throughout the 24-hour day and that the probability of a blockage during any particular hour is 1:24, which represents an even distribution of train movements. For the peak hour, one train is assumed, which is a conservative assumption since there would not be a train on many days during the peak hour.

Total traffic delays at each individual grade crossing were computed for the a.m. and p.m. peak hours. This is the worst case, since many train movements would occur outside the peak hours.

There are no adopted or standard guidelines for determining whether an impact due to rail blockage of a roadway is significant. In the case of the proposed Project, the two at-grade crossings are located on relatively low-volume minor arterial roadways, which serve primarily port traffic.

Table 14 summarizes the vehicle delay that is anticipated at the crossings due to the proposed Project rail activity during the peak hours. As shown, the delay calculations were performed at crossings at Avalon Boulevard and Henry Ford Avenue. The results indicate that the added average vehicle delay would range up to a maximum of 97 seconds per vehicle at Henry Ford Avenue with the proposed Project. Average vehicle delay is the average of all vehicles at the crossing during the assessed timer period. Thus, some vehicles will not experience any delay since they will arrive just as the gate is rising and some will experience more delay if they arrive just as the gate is coming down at the beginning of the crossing. The average represents all vehicles at the crossing during the time the train passes and the gate is going down, is down and is rising back up. Also, other port terminal projects, including the Berth 136-147 Terminal project, would further increase delay at the grade crossings. Based on the threshold of significance of 55 seconds of average vehicle delay, the proposed Project would make a cumulatively considerable and unavoidable contribution to the significant cumulative impact.

Table 14. Rail Crossing Vehicle Delay Due to Proposed Project

a.m. Peak Hour				
Rail Crossing	Average Delay per Vehicle (sec/veh)			
	Year 2005	Year 2015	Year 2030	Year 2045
1. Avalon Boulevard (With Project)	71	72	72	72
2. Henry Ford Avenue (With Project)	79	82	86	88
p.m. Peak Hour				
Rail Crossing	Average Delay per Vehicle (sec/veh)			
	Year 2005	Year 2015	Year 2030	Year 2045
1. Avalon Boulevard (With Project)	74	74	75	75
2. Henry Ford Avenue (With Project)	82	86	93	97

The proposed Project and Alternatives 3 through 5 will make a cumulatively considerable and unavoidable contribution to the significant cumulative impact at the Henry Ford Avenue and Avalon Boulevard grade crossings resulting from contributions to rail traffic.

Rationale for Findings

The only at-grade crossings potentially affected by the proposed Project are at Avalon Boulevard and Henry Ford Avenue. The grade crossing at Fries Avenue would be eliminated as part of the South Wilmington Grade Separation project. Impacts from the proposed Project along with other cumulative projects on the regional rail corridors north of the proposed Project site would not be significant since the Alameda Corridor project has been completed. The completion of the corridor

has eliminated the regional at-grade rail/highway crossings between the Port and the downtown rail yards; therefore, there would be no change in vehicular delay at any of those crossings due to proposed Project-related rail activity (they are now all grade separated). Significant cumulative impacts would occur at Avalon Boulevard and Henry Ford Avenue crossings. Cumulatively, there would also be a significant impact on the at-grade rail crossings east of downtown Los Angeles. This cumulative impact would be due to the overall growth in rail activity that would occur to serve the added cargo throughput in the Southern California region and the nation.

Public Comment

One comment was received in regards to Cumulative Impact Trans-5 from RCTC (13-18). RCTC suggested that the Recirculated Draft EIS/EIR failed to find significant cumulative impacts due to rail congestion in Riverside County and recommended that the Port implement a series of mitigation measures including grade separations.

As discussed in the Recirculated Draft EIS/EIR, the Port does not assemble trains, make routing decisions, or otherwise determine the scheduling of trains. Contrary to the comment, the cumulative analysis regarding rail delay does not merely repeat that rail operators, not the ports, make decisions about train route. Rather, the cumulative impacts discussion regarding rail delay in Section 4.2.6.6 of the Recirculated Draft EIS/EIR acknowledges that “it is possible that the cumulative development of the West Basin (Berths 97-109, Berths 121-131, Berths 136-147) may together result in an added train during the peak hour.” Section 4.2.6.6 also calculates the average vehicle delay at near-Port at-grade rail crossings (based on gate closure times that are, in turn, based on average train speed and length), and determined that the added train during the peak hour from the three combined West Basin terminals would result in an average vehicle delay greater than the significance threshold of 55 seconds per vehicle. Because of this, the proposed Project was deemed to make a cumulatively considerable contribution to a significant impact related to at-grade crossings at the two near-Port crossings.

As describe in more detail below, the Port conducted a field survey of trains traveling along rail lines through Riverside County and the City of Riverside, and confirmed that trains in outlying areas travel at an average speed that is much greater than the 9 miles per hour assumed in the Recirculated Draft EIS/EIR for at-grade crossings in the near-Port areas. These substantially higher-speed trains in the outlying region translated into an average gate closure time at the at-grade crossings that is substantially less than the gate closures at near-Port locations (approximately 3 minutes in the Riverside area compared to an estimated 11.7 minutes at the near-Port locations). As shown below, one additional train in the peak hour in Riverside County and City of Riverside would result in an average vehicle delay of approximately 5 to 6 seconds, which is considerably below the significance threshold in the Recirculated Draft EIS/EIR of 55 seconds per vehicle.

A cumulative analysis considers the impact of multiple trains from different sources. While the delay would increase, multiple trains would cumulatively contribute to an impact that is less than significant. For example, four trains arriving in a peak hour (with an average gate time of 3 minutes) would result in an average delay of approximately 24 seconds per vehicle. It should be noted that the likelihood of even four trains per hour is very low. During 48 separate hours of observations in Riverside County in October 2008, there were only 3 hours (out of 48) when more than two trains were observed. The breakdown of trains per hour was as follows:

- 0 trains per hour: 29 percent
- 1 train per hour: 35 percent

- 2 trains per hour: 29 percent
- 3 trains per hour: 4 percent
- 4 trains per hour: 2 percent
- 5 or more trains per hour: 0 percent

It should also be pointed out that this average vehicle delay of 5 to 6 seconds per vehicle represents a cumulative impact of the trains assembled from three West Basin terminals combined. Because the average vehicle delay from cumulative trains from the West Basin terminals would be substantially less than the significance threshold of 55 seconds per vehicle, there is no requirement to provide mitigation, as suggested in the comment.

To assess the impact of trains in Riverside County, a comprehensive data collection and analysis study was conducted to determine gate time. Trains were observed at 12 crossings in Riverside County for the week of October 20 to 24, 2008. During 48 hours of observations (4 hours per location) from October 20, 2008, through October 24, 2008, a total of 54 freight trains were observed (Metrolink trains were not counted). Of those trains, 39 trains were BNSF, and 15 were UP. Most (50) of the trains were container trains. The average train included 103 platforms (commonly called “cars”). There was no pattern to the train arrivals; they occurred randomly throughout the week.

The average train crossing time was 2:23 (2 minutes, 23 seconds). This time does not include the additional gate down/up time (per the analysis in the Draft Recirculated Draft EIS/EIR, which value is 36 seconds per train). Therefore, the average total gate time is 2:59 for trains in Riverside County. At the two at-grade crossings analyzed in the Recirculated Draft EIS/EIR, that time is approximately 11.7 minutes including the gate time because trains are moving slowly near the Port facilities.

Traffic volumes vary by locations, and throughout the day. To test the sensitivity of the calculation and assess potential impacts, traffic volumes between 1,000 and 25,000 vehicles/day were evaluated on two- and four-lane roadways (one or two lanes in each direction). The percentage of traffic during each hour was developed from a random location in Riverside County (on SR-60) using data from the Caltrans PeMS database. Then, the resulting delay was calculated on each of six roadways for a 24-hour period, recording the average and highest (peak hour delay).

Table 15 is a summary of the projected average delay (for a range of at-grade crossings) for different traffic volumes during each hour of the day.

Table 15. Sample Delay Calculation

Hour	Delay % of Traffic	Daily Traffic Volumes					
		1,000	5,000	10,000	15,000	20,000	25,000
12 to 1 a.m.	1.1%	4.5	4.5	4.6	4.6	4.6	4.7
1 to 2 a.m.	0.8%	4.5	4.5	4.6	4.5	4.6	4.6
2 to 3 a.m.	0.7%	4.5	4.5	4.6	4.5	4.6	4.6
3 to 4 a.m.	0.8%	4.5	4.5	4.6	4.5	4.6	4.6
4 to 5 a.m.	1.6%	4.5	4.6	4.7	4.6	4.7	4.8
5 to 6 a.m.	35%	4.5	4.7	5.0	4.9	5.0	5.2
6 to 7 a.m.	6.1%	4.5	4.9	5.6	5.2	5.6	6.0
7 to 8 a.m.	6.8%	4.6	5.0	5.8	5.4	5.8	6.2
8 to 9 a.m.	6.4%	4.5	5.0	5.7	5.3	5.7	6.1
9 to 10 a.m.	5.6%	4.5	4.9	5.5	5.2	5.5	5.8
10 to 11 a.m.	5.3%	4.5	4.9	5.4	5.1	5.4	5.7

Table 15. Sample Delay Calculation

Hour	Delay % of Traffic	Daily Traffic Volumes					
		1,000	5,000	10,000	15,000	20,000	25,000
11 a.m. to 12 p.m.	5.5%	4.5	4.9	5.4	5.2	5.4	5.8
12 to 1 p.m.	5.7%	4.5	4.9	5.5	5.2	5.5	5.8
1 to 2 p.m.	5.8%	4.5	4.9	5.5	5.2	5.5	5.9
2 to 3 p.m.	5.8%	4.5	4.9	5.5	5.2	5.5	5.9
3 to 4 p.m.	5.8%	4.5	4.9	5.5	5.2	5.5	5.9
4 to 5 p.m.	5.7%	4.5	4.9	5.5	5.2	5.5	5.8
5 to 6 p.m.	5.7%	4.5	4.9	5.5	5.2	5.5	5.8
6 to 7 p.m.	4.9%	4.5	4.8	5.3	5.1	5.3	5.6
7 to 8 p.m.	4.5%	4.5	4.8	5.2	5.0	5.2	5.5
8 to 9 p.m.	4.1%	4.5	4.8	5.1	5.0	5.1	5.4
9 to 10 p.m.	3.6%	4.5	4.7	5.1	4.9	5.1	5.2
10 to 11 p.m.	2.6%	4.5	4.6	4.9	4.8	4.9	5.0
11 p.m. to 12 a.m.	1.7%	4.5	4.6	4.7	4.6	4.7	4.8
Weighted Average		4.5	4.9	5.4	5.1	5.4	5.7
Maximum		4.6	5.0	5.8	5.4	5.8	6.2

To summarize the results, a comprehensive set of calculations was completed to assess the impacts of different trains on different roads at different times of day. Based on the adjusted average gate time of 2:59, the results are summarized in Table 16.

Table 16. Projected Average Delay (per vehicle per hour of traffic) at Riverside County Crossings

Lanes ^a	1	1	1	2	2	2
Daily Traffic Volume ^b	1,000	5,000	10,000	15,000	20,000	25,000
Average Delay ^c	4.5	4.9	5.4	5.1	5.4	5.7
Peak Hour Delay ^c	4.6	5.0	5.8	5.4	5.8	6.2

^aNumber of approach lanes per direction

^bVehicles/day

^cSeconds/vehicle

Source: CH2M HILL calculations

As can be seen in Table 16, based on the average total gate time of 2:59, the average delay (approximately 5 to 6 seconds per vehicle throughout the peak hour) will be below the impact threshold (55 seconds average delay per vehicle per hour of traffic), and significant vehicle delay impacts at the at-grade crossings in Riverside County (and City of Riverside) are not anticipated. Therefore, no mitigation for such impacts is required.

Noise

Cumulative Impact NOI-1: Construction Noise

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.

A cumulative construction noise impact would be assessed if construction activities necessary to implement the proposed Project, in combination with one or more of the related and cumulative projects, would cause a substantial short-term increase in noise at a sensitive receptor, and the project contribution would be considered cumulatively considerable. A substantial increase is defined to be a 5-dBA increase during any daytime hour when construction activities would occur. Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receiver, a significant cumulative impact would result.

Finding

In the construction phase of the proposed Project, construction of additional backlands and in-water construction have been identified as causing significant noise impacts under CEQA at noise-sensitive locations at Knoll Hill, along Pacific Avenue, and in areas west of Front Street and south of the Vincent Thomas Bridge. There would be a substantial increase in noise, identified in Section 3.11 of the Recirculated Draft EIS/EIR. Because of the proximity of the C Street/Figueroa Street interchange project and the TraPac project, the likelihood that they could be concurrent with the construction activities required for the proposed Project, and the proximity of other related and cumulative projects in the vicinity of the San Pedro neighborhoods, there would be significant cumulative construction noise impacts upon these neighborhoods.

In the Wilmington neighborhoods, noise levels due to construction activities at Berths 97-109 were projected to be near existing baseline noise levels resulting from other local sources of noise (see Section 3.11). While construction of the proposed Project is not expected to cause significant noise impacts in the Wilmington neighborhoods, it is likely that there would be significant cumulative noise impacts at those locations if the proposed Project construction occurs concurrently with other related projects. Mitigation Measure NOI-1 would be implemented to reduce impacts.

The IHC Hydrohammer (SC series with sound insulation system) pile driver generates 86 dBA_{Leq} at 100 feet compared to 95 dBA_{Leq} for standard machines. This measure cannot be applied to Phase I construction, which was completed in 2003. The use of the IHC pile driver will reduce noise impacts by up to 2 dBA, reducing significant noise impacts at receivers ST-1 to ST-4 during Phase II and Phase III.

Considering the distances between the construction noise sources and receivers, the standard controls and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a cumulatively significant impact. Consequently, construction of the proposed Project or any alternative would make a cumulatively considerable contribution to significant cumulative noise impacts at Knoll Hill, Front Street, Pacific/Channel Street, and Wilmington receivers.

Rationale for Findings

The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause a cumulative construction noise impact. In the San Pedro neighborhoods, related projects that would likely occur concurrently with the China Shipping project and would result in potential construction noise impacts include the I-110/SR-47 Connector Improvements, the San Pedro Waterfront

Enhancements Project, and the Channel Deepening Project. These projects would result in significant noise impacts to adjoining receivers during construction.

Near Wilmington, TraPac Marine Terminal at Berths 136-147, West Basin would also occur just north of the proposed Project. It is likely that construction activities associated with the TraPac project would be concurrent with either Phase II or Phase III construction activities of the proposed Project. The C Street/Figueroa Street Interchange (would be located immediately adjacent to the Harry Bridges Boulevard widening element of the proposed Project and the Harry Bridges Buffer Area. It is likely that construction activities associated with the C Street/Figueroa Street interchange would either be concurrent with construction activities necessary for the Harry Bridges Boulevard widening and Harry Bridges Buffer Area, or would occur in about the same timeframe either shortly before or after extending the period of elevated noise levels. It is likely that construction activities and associated noise levels of related projects would be similar to those expected from the equipment necessary to construct the project elements. There are other projects in the related and cumulative projects list that could also affect sensitive receivers within the cumulative geographic scope. The New Dana Strand Development currently under construction is located on C Street adjacent to sensitive receivers. The Avalon Boulevard Corridor Development would include development of Avalon Triangle Park and improvements at Banning's Landing Cultural Center. It is likely that the other related projects would result in significant noise impacts at some sensitive locations due to concurrent construction.

Cumulative Impact NOI-3: Creation of Operational Noise That Would Substantially Exceed Existing Ambient Noise Levels at Sensitive Receivers –Cumulatively Considerable

Cumulative Impact NOI-3 represents the potential of the proposed Project along with other cumulative projects to cause a substantial permanent increase in ambient noise levels at sensitive receivers within the geographic scope of the project.

Finding

Noise effects of operational activities, traffic, and railroad movements associated with the proposed Project are presented in Section 3.11. Analyses of noise resulting from activities within the proposed Project area and vehicular and rail traffic generated by the proposed Project demonstrate that noise from project operations would generate noise levels that would be significantly higher than baseline noise levels at Knoll Hill and Front Street receivers. Because the noise levels resulting from onsite activities would increase CNEL values by 5 to 6 dBA at these locations, increased noise from operations at Berths 97-109 would make a cumulatively considerable contribution to cumulative noise levels. At the Wilmington neighborhoods, where the proposed Project would not cause significant operational noise impacts by itself, it is expected that a cumulative significant impact would occur when combined with other related projects.

Therefore, the proposed Project would result in cumulatively considerable onsite noise impacts at the Knoll Hill, Front Street, Pacific/Channel Street, and Wilmington neighborhoods under CEQA.

Measure **MM NOI-1**, which consist of construction of noise barriers at the private property lines that would block the line-of-sight to Port operations and the adjoining roadways, would be required for mitigation of cumulative impacts. Residual impacts would be significant due to the uncertain feasibility of erecting noise barriers at the private property to mitigate construction noise impacts. As

a consequence, the residual operational noise impact would make a cumulatively considerable contribution to a significant cumulative impact.

Rationale for Finding

Onsite operations at the Port of Los Angeles, roadway traffic on the roadway network along major roadways in the study area including I-110 and SR-47, Vincent Thomas Bridge, Harry Bridges Boulevard, and other local streets in the Wilmington and San Pedro areas are the dominant sources of community noise at noise sensitive receivers within the geographic scope of the China Shipping Project. Virtually all of the cumulative projects, with the exception of, for instance, some of the Portwide operational plans and programs, would contribute to existing noise sources such as traffic, terminal operations, and neighborhood sources including parks and schools, and therefore significant cumulative noise impacts would occur

Public Services and Utilities

Cumulative Impact PS-4: Cumulative Impacts on Water, Wastewater, and Solid Waste Facility Capacities – Cumulatively Considerable and Unavoidable

Cumulative Impact PS-4 represents the potential of the proposed Project along with other cumulative projects to generate substantial solid waste, water, and/or wastewater demands that would exceed the capacity of existing facilities.

Finding

The proposed Project would generate 52.8 tons of solid waste per year, which would represent 0.0029 percent of the Chiquita Canyon Landfill permitted daily capacity, 0.0026 percent of the Sunshine County Landfill permitted daily capacity, and 0.0024 percent of the available permitted El Sobrante Landfill daily capacity. Solid waste generated from Project operations after the closure dates for the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill (2030 and after) would represent a significant impact to landfill capacity, and therefore, the proposed Project would make a cumulatively considerable contribution to a significant cumulative solid waste impact under CEQA or NEPA. However, if additional adequate landfill capacity is permitted and made available, if more distant land fill capacity is utilized for solid waste generated in the City, and/or if the achievement of Zero-Waste solutions in the City as defined in the City's SWIRP occurs over an extended time period, then the solid waste generated by the Project likely would not represent a significant impact to landfill capacity, and the solid waste generated by the Project beyond 2030 would not represent a cumulatively considerable contribution to a significant cumulative solid waste impact under CEQA. In addition, the demolition of the Catalina Express Building would generate demolition debris in the near term, some or all of which would be disposed of at a landfill. Although construction and demolition debris is one of the greatest individual contributors to reductions in solid waste capacity, the amount of debris to be disposed of would not substantially affect the capacity or longevity of the area landfills after mitigation; therefore, the demolition of the Catalina Express Terminal would not make a cumulatively considerable contribution to a significant cumulative solid waste impact under CEQA.

MM PS-1 through **MMPS-3**, as described in Section 3.13.4.3.1 of the Recirculated Draft EIS/EIR respectively provide that: 1) demolition and/or excess construction materials shall be separated onsite for reuse/recycling or proper disposal and separate bins for recycling of construction materials shall be provided onsite, 2) materials with recycled content shall be used in project construction and chippers on site shall be used to further reduce excess wood for landscaping cover, and 3) the proposed Project complies with policies and standards set forth in the City's Solid Waste Integrated Resources Plan (SWIRP) following 2025, which has the goal of zero waste. The implementation of **MM PS-1** through **MM PS-3** would reduce the proposed Project specific impacts on solid waste generation, such that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to solid waste capacity under CEQA.

Rationale for Finding

Construction and operation of past projects has resulted in existing demands for water and generations of wastewater and solid waste. These demands and generations are currently accommodated by existing facilities. In order to properly plan for water supply, the LADWP determines water demands using factors such as demographics, weather, economy, and trends in development. The LADWP, in Chapter 6 of the UWMP, which is hereby incorporated by reference, determined an existing water demand within the DWP service area that can be accommodated by the planned water supply of the same amount (LADWP, 2005). The LADWP Urban Water Management Plan (UWMP) projects overall water supply reliability within the DWP service area through 2030; the LADWP forecast specifically includes anticipated demand from projects which are included in the Port's Community Plan or the Port Master Plan, including all past, present and reasonably foreseeable future Port projects (LADWP, 2005). LADWP, in Exhibit C (Service Reliability Assessment of Average Year) in Chapter 6 of the UWMP, expects it will be able meet the demand through 2030 with a combination of existing supplies, planned supplies and MWD purchases (existing and planned). The California Urban Water Management Planning Act requires water suppliers to develop water management plans every 5 years. Because of this, the LADWP would continue to project future water demands and supply through new UWMPs every 5 years. Although the planning horizon for the current UWMP includes 2030, future UWMPs will cover the 2045 project horizon, which will include water supply planning for the City in 2045 and beyond. Because of the LADWP will continue to the plan and provide water supply for its customers, the past, present, and reasonably foreseeable future projects would not result in a significant cumulative impacts on the provision of water.

The TITP wastewater treatment plant is currently operating at 54 percent of its daily capacity of 30 million gallons per day, resulting in an available capacity of 13.8 million gallons of additional wastewater flow per day (personal communication, Fumaer, 2007). The City projects that by 2020, wastewater flows in the TITP service area will grow to 19.9 mgd (City of Los Angeles, 2006); therefore, approximately 10 mgd in daily capacity at TITP would remain unused and available for future years (beyond 2020). Wastewater from the related projects would not significantly affect existing or future capacity at TITP due to the substantial remaining capacity at TITP beyond 2020, which, based on the growth rate of the wastewater flow projected between 2006 and 2020, is estimated to adequately handle 2045 wastewater flow demands. Consequently, the past, present, and reasonably foreseeable future projects would not result in a significant cumulative impacts to wastewater treatment capacity.

The three landfills that serve the City, including the Port area, are the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill. As described in Section 3.13.2.2.4, the Chiquita Canyon Landfill has an allotted daily throughput capacity of 5,000 tons and is expected to

operate until 2025. The Sunshine Canyon Landfill has a daily throughput capacity of 5,500 tons allotted for City use and is expected to accommodate demands until 2029 (Sanitation District of Los Angeles County, 2007). The El Sobrante Landfill has a maximum daily permitted capacity of 10,000 tons per day, and its projected closure date is 2030 (Sanitation Districts of Los Angeles County, 2007). Approximately 4,000 tons per day of capacity is reserved for refuse generated in Riverside County (City of Lake Elsinore, 2006). Solid waste generated from related projects after closure of the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill (2030 and after) would represent a significant cumulative impact to landfill capacity if no additional adequate landfill capacity is permitted and made available, or if more distant landfill capacity is not utilized for solid waste generated in the City over an extended time period.

Many of the projects identified in the Cumulative Section are Port redevelopment projects within the proposed Project vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that water consumption, and wastewater and solid waste generations would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional utility demands. These projects include the Pier 400 Container Terminal and Transportation Corridor Project, the Berth 136-147 Project, Evergreen Improvements Project, Middle Harbor Terminal Redevelopment (POLB), Berth 121-131 Project, Berth 171-181 Pasha Marine Terminal Improvements, Berth 302-305 APL Container Terminal Expansion, Ponte Vista, and Dana Strand. The number of related projects would increase the demands for water as well as generation of wastewater and solid waste. Based on the above, the past, present, and reasonably foreseeable future projects would not result in a significant cumulative impacts on the provision of water, would not result in a significant cumulative impact on wastewater treatment capacity, but would result in a significant cumulative impact to solid waste capacity after the closure dates of the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill, if no additional adequate landfill capacity is permitted and made available, if more distant landfill capacity is not utilized for solid waste generated in the City, and/or if the achievement of Zero-Waste solutions as defined in the City's SWIRP do not occur over an extended time period.

Water Quality

Cumulative Impact WQ-1: Cumulative Discharge Effects to Water and Sediment Quality

Cumulative Impact WQ-1 represents the potential of the proposed Project, along with other cumulative projects, to create pollution, cause nuisances, or violate applicable standards.

Finding

The proposed Project would not result in any direct discharges of wastes or wastewaters to the Harbor. However, stormwater runoff from the onshore portions of the project area would flow into the Harbor, along with runoff from adjacent areas of the large, primarily urbanized, watershed. Stormwater runoff from the backland and wharf areas within the proposed Project site would be governed by a permit, similar to those required for the other cumulative projects, that specifies constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters. Relative to both CEQA and NEPA baseline conditions, the proposed Project operations would contribute higher volumes of runoff (due to the greater relative impervious

surface areas associated with the backlands), but no substantial differences in pollutant discharges due to implementation of regulatory control measures. The inputs from the proposed Project would be negligible compared with those from the entire watershed, the runoff could contain contaminants (e.g., metals) that have been identified as stressors for portions of the Los Angeles/Long Beach Harbor complex. In addition, the proposed Project would be operated in accordance with industrial SWPPPs that require monitoring and compliance with permit conditions. SUSMP requirements would also be implemented via the planning, design, and building permit processes. With SWPPP and SUSMP compliance, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact relative to the CEQA baseline.

However, in-water construction of the proposed Project has the potential to result in spills directly to Harbor waters. While these project-level spills during construction would be subject to SPCC regulations (that would contain and neutralize the spill) and spill responses by the dredging contractors (deploy floating booms to contain and absorb the spill and use pumps to assist the cleanup) that would prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor, accidental spills during construction would nonetheless be considered to make a cumulatively considerable contribution to a cumulatively significant water quality impact if spills from other in-water construction projects also occur.

The proposed Project would result in an increased number of ship visits to the Ports of Los Angeles and Long Beach, which could contribute to a proportionally higher potential for accidental spills and illegal vessel discharges within the Harbor. Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from proposed Project-related upland operations are expected to be limited to small volume releases because large quantities of those substances are unlikely to be used, transported, or stored on the site. In addition, the terminal operator will be required to implement SPCC and OSCP Plans that ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. Because of this, upland operations of the proposed Project would not make a cumulative considerable contribution to a significant cumulative impact related to spills.

The increased number of ship calls associated with the proposed Project could contribute to a comparatively higher number of spills compared to baseline conditions. Although spill events would be addressed according to procedures described in the SPCC, for oceangoing vessels that carry substantial amounts of fuel, an accidental spill could conceivably be large in the event of a catastrophic accident, which, although remote, could result in significant contamination entering the Harbor. As a result, the proposed Project's vessel operations could result in a cumulatively considerable contribution to a significant cumulative water quality impact related to accidental spills from oceangoing vessels. The proposed Project would also result in potential illegal vessel discharges and pollutants leaching from vessel hull coatings, which would make a cumulatively considerable contribution to a significant cumulative impact relative to both the CEQA.

As described in the Section 3.14.4.3 of the Recirculated Draft EIS/EIR, the potential for construction of the proposed Project to result in a direct spill to Harbor waters is low. In the event of a spill, the planning effort required by SPCC regulations to contain and neutralize the spill and the spill response by the dredging contractors (deploy floating booms to contain and absorb the spill and use pumps to assist the cleanup) would prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor. Compliance with regulations is a standard practice during in-water construction, which would ensure that project level impacts would be less than significant level. Accidental spills during in-water construction of the proposed Project, nonetheless, would be considered to make a cumulatively considerable contribution to a cumulatively significant water

quality impact if spills from other in-water construction projects also occur because no measures, aside from project-level regulatory compliance and standard practices, are available to mitigate accidental spills during construction that could have additive effects.

For cumulative water quality impacts from contaminants leaching from vessel hulls and illegal discharges, no mitigation measures are available; therefore, significant cumulative impacts to water quality would remain for the proposed Project.

Regarding cumulative water quality impacts related to accidental in-water spills from oceangoing vessels during operations, although spill events would be addressed according to procedures described in the SPCC, oceangoing vessels carry substantial amounts of fuel, and an accidental spill could conceivably be large in the event of a catastrophic accident. Although remote, if a catastrophic accident occurs, it could result in significant contamination of Harbor or ocean waters. There are no mitigation measures available that would prevent an accident from occurring.

Rationale for Finding

Water and sediment quality within the geographic scope are affected by activities within the Harbor (e.g., shipping, wastewater discharges from the Terminal Island Treatment Plant [TITP], inputs from the watershed including aerial deposition of particulate pollutants, and effects from historical (legacy) inputs to the Harbor). As discussed in Section 3.14, portions of the Los Angeles/Long Beach Harbor complex are identified on the current Section 303(d) list as impaired for a variety of chemical and bacteriological stressors and effects to biological communities. For those stressors causing water quality impairments, TMDLs will be developed that will specify load allocations from the individual input sources, such that the cumulative loadings to the Harbor would be below levels expected to adversely affect water quality and beneficial uses of the water body. However, these TMDL studies are not planned until the year 2019. Thus, in the absence of restricted load allocations, the impairments would be expected to persist.

Present and reasonably foreseeable future projects with in-water construction components, such as dredging, dike placement, fill, pile driving, and pier upgrades, would result in temporary and localized effects to water quality that would be individually comparable to those associated with proposed Project. Changes to water quality associated with in-water construction for the other cumulative projects would not persist for the same reasons discussed in Section 3.14. Therefore, cumulative impacts would occur only if the spatial influences of concurrent projects overlapped. Of the cumulative projects listed in Table 4-1 in Chapter 4 of the Recirculated Draft EIS/EIR, only the Channel Deepening, Berths 136-147 and Berth 121-131 Development are located in the vicinity of the proposed Project and involve in-water construction activities. Dredging for the Channel Deepening Project has been completed. A number of projects within the Port of Long Beach, including the Middle Harbor Development, Piers G and J Redevelopment, Pier T, and Pier S, would involve dredging and/or in-water construction. However, as described in Section 3.14, water quality effects from dredging would be limited, and therefore, the water quality effects of these projects would be limited to the immediate dredging or construction area. As a result, in-water construction of the present and reasonably foreseeable future projects would not result in significant cumulative impacts to water quality.

Wastewater discharges associated with project operations and runoff from project sites would be regulated by NPDES or stormwater permits. The permits would specify constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters. In addition, related projects in the Ports of Los Angeles and Long Beach would be operated in

accordance with industrial SWPPPs that require monitoring and compliance with permit conditions. SUSMP requirements would also be implemented via the planning, design, and building permit processes. Although standard regulatory compliance measures would apply to the related projects, which would minimize their pollutant contributions to the Harbor, the Harbor is still listed on the Section 303(d) list as being impaired, and would likely remain so until TMDLs can be fully implemented throughout the entire watershed. Consequently, a significant cumulative impact to water quality related to its Section 303(d) listing would remain.

Development of port facilities associated with the cumulative projects, including Port 400, Berths 136-147, Evergreen Improvements, Berth 302-305 APL Terminal, Berth 212-224 Upgrades, Berth 121-131 Reconfiguration, Middle Harbor Terminal, Piers G & J Terminal, Pier T Terminal, and Pier S Terminal, are expected to contribute to a greater number of ship visits to the Ports of Los Angeles and Long Beach. Assuming that the potential for accidental spills, illegal vessel discharges, and leaching of contaminants from vessel hulls would increase in proportion to the increased vessel traffic, waste loadings to the Harbor would also be expected to increase. The significance of this increased loading would depend on the volumes and composition of the releases, as well as the timing and effectiveness of spill response actions. However, as noted for the proposed Project (Section 3.14.4.3.1.2), there is no evidence that illegal discharges for ships are causing widespread impacts to water quality in the Harbor. However, because Harbor waters are considered impaired and because these related projects would contribute to pollutant loadings through accidental spills and illegal discharges, or pollutant leaching from vessel hull coatings, these related projects would result in significant cumulative water quality impacts.

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 project and cumulative impacts related to air quality, noise, recreation, and risk of upset. Four 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) conducting various Public Health surveys (USEPA comment 1-17, CSE comment 25-16) and (2) additional mitigation (USEPA comment 1-18 and CSE comment 25-16)

Public Health Surveys:

The comments from USEPA and CSE suggest conducting a port-wide Health Impact Assessment (HIA)-like analysis. 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 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 Health Risk Assessment (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, 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 immunocompromised), 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 also include a discussion of some recent studies that link pollution, specifically Diesel PM, to various health impacts including cancer, asthma and cardiovascular disease.

The Recirculated Draft EIS/EIR also includes a particulate matter mortality analysis that assesses the incidence (as opposed to risk) of premature death as a result of the proposed Project. As discussed in Section 3.2, epidemiological studies substantiate the correlation between the inhalation of ambient PM and increased mortality and morbidity (CARB 2002a and CARB 2007). The analysis is based on guidance from CARB and relies on numerous studies and research efforts that focused on PM and ozone as they represent a large portion of known risk associated with exposure to outdoor air

pollution. CARB's analysis of various studies allowed large-scale quantification of the health effects associated with emission sources.

The Environmental Justice Section (Chapter 5) of the Recirculated 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 Recirculated Draft EIS/EIR on minority and low-income individuals in the local communities surrounding the Port. The Socioeconomic Section (Chapter 7) 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-like survey as part of the Final EIR.

The Port however, will track all mitigation measures through the Mitigation Monitoring Reporting Program (MMRP). Tracking will include an annual report to the Board of Harbor Commissioners at a public Board meeting.

EJ Mitigation Measures

In regards to comment USEPA 1-18, USEPA recommended a series of mitigation measures (individually addressed below) to further reduce environmental justice impacts. The Corps and Port are committed to mitigating disproportionate effects to the extent feasible. The Port's primary means of mitigating the disproportionate effects of air quality impacts is to address the source of the impact through a variety of Port-wide clean air initiatives, including the CAAP, the Sustainable Construction Guidelines, and the CAAP San Pedro Bay [Health] Standards. As part of the San Pedro Bay Standards, the Port will complete a Port-wide Health Risk Assessment (HRA) covering both the Ports of Los Angeles and Long Beach that will include a quantitative estimate of overall health risk impacts from the Ports' existing operations. Current and future projects approval will be dependent on meeting the SPB Standard. Through a Memorandum of Understanding, the Port has previously agreed to establish a Port Community Mitigation Trust Fund geared towards addressing, outside the process of CEQA/NEPA review of individual proposed Port projects, the overall off-port impacts created by existing Port operations. 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 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 \$0.15 per ton of crude oil received at the terminal up to an amount of approximately \$5 million. The off-Port community benefits of the MOU are designed to offset overall effects of Port operations. While the MOU does not alter the legal obligations of the lead agencies under NEPA or CEQA to disclose and evaluate mitigation measures to reduce or avoid cumulative impacts of the Project, and therefore is not an environmental justice mitigation per se, it would have particular benefits for harbor area communities where disproportionate effects could occur.

The remainder of this discussion addresses the individual environmental justice mitigations suggested in the comments. All feasible mitigation measures as required by CEQA have been applied to the

proposed Project in the Recirculated Draft EIS/EIR. It should be noted that the mitigation measures provided in the Recirculated Draft EIS/EIR are consistent with the CAAP, which has undergone extensive public review and which serves as the overall guide to minimizing Port-wide air quality impacts to local communities. Regarding the recommendation to provide a health care clinic, such a measure would not reduce air emissions from the proposed Project, and so would not be an effective mitigation measure under CEQA to avoid or reduce any significant impacts of the proposed Project on the physical environment. It is the intention of the Port to directly reduce or eliminate the source of emissions and, therefore, to reduce any long-term health care costs that might be associated with Port project development. The Port currently operates a monitoring station in Wilmington and is adding real-time recording that will be displayed on a Web site operated jointly by the Ports of Los Angeles and Long Beach. The Port focuses its health-related mitigation primarily on a wide array of measures to reduce the emissions that cause the health impacts. In addition, the Ports of Los Angeles and Long Beach are in the process of finalizing the CAAP San Pedro Bay Standards in coordination with SCAQMD and CARB. In support of the CAAP, the South Bay Ports will prepare a Port-wide Health Risk Assessment to more quantitatively estimate cumulative impacts from Port complex operations and individual projects.

Regarding suggestion to engage in proactive efforts to hire local workers and the suggestion to provide public education programs, the Port has an on-going set of mechanisms to promote inclusion of small, minority, woman-owned and similar business enterprises, many of which are located in the local area, in its contracting. In addition, job training targeted to Harbor Area communities is provided by economic development organizations, the City of Los Angeles, and other entities. The Port provides outreach to the community in the form of meetings with the PCAC and other community groups and individuals and provides community education information on its website, in newsletters that are available in English and Spanish, through outreach at community events and festivals, and by other means. Related to the suggestion of establishing Environmental Management Systems, the Port has developed and is implementing an award-winning Environmental Management System (briefly summarized in Section 1 of the Recirculated Draft EIS/EIR) that improves efficiency and reduces environmental impacts from operations.

Related to the suggestion to improve access to healthy food by establishing markets on Port lands, most of the land administered by LAHD is zoned to allow for coastal dependent cargo transport activities and related facilities, including Berth 97-109 which is zone industrial. Thus, although some of the land administered by LAHD is zoned in such a way that it could accommodate a retail or commercial use, establishing a retail outlet or farmer's market would not be consistent with the zoning at Berth 97-109. Such a facility may be more appropriate for the San Pedro or Wilmington Waterfront Projects, projects that are developing applicable Port land for community use.

In regards to truck idling, Mitigation Measure AQ-5 has been amended as shown below, to include construction trucks.

MM AQ-5: Best Management Practices

Phases II and III:

The following types of measures are required on construction equipment (including on-road trucks):

- 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.*

LAHD shall implement a process by which to select additional BMPs to further reduce air emissions during construction. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list.

Finally, related to the suggestion to continue expansion and improvements to the local community's parks and recreation system, as described above, the Port Community Mitigation Trust Fund will fund a study of off-port impacts, including recreation and other topics. In addition, the Port's proposed San Pedro Waterfront Project, if approved, would provide open space, recreation and pedestrian amenities.

In regards to the Coalition for a Safe Environment's suggestion to install air purifiers, as discussed above the Port has previously agreed to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by existing Port operations outside of the context of project-specific NEPA and/or 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 \$0.15 per ton of crude oil received at the terminal up to an amount of approximately \$5 million. The off-Port community benefits of the MOU are designed to offset overall effects of existing Port operations. While the MOU does not alter the legal obligations of the lead agencies under CEQA to disclose and evaluate mitigation measures to reduce or avoid cumulative impacts of the Project, and therefore is not an environmental justice mitigation per se, it would have particular benefits for harbor area communities where disproportionate effects could occur.

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 Recirculated 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 in these resource areas: Aesthetics, Air Quality, and Ground Transportation. These disagreements are addressed in detail in response to comments. The Board finds that substantial evidence supports the conclusions in the Final EIR.

III. Alternatives to the Proposed Project

Alternatives Considered

Eighteen 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. Ten 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 2.5.2 and Section 6 of the Recirculated Draft EIS/EIR. Seven 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 seven alternatives are evaluated co-equally with the proposed Project for all environmental resources in Chapter 3 in the Recirculated Draft EIS/EIR. Chapter 6 of the EIS/EIR compares the proposed Project and these seven alternatives and identifies the environmentally preferred and environmentally superior alternative. The seven 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 Fill: No New Wharf Construction at Berths 102
- Alternative 4 – Reduced Fill: No South Wharf Extension at Berth 100
- Alternative 5 – Reduced Construction and Operation: Phase I Only
- Alternative 6 – Omni Terminal
- Alternative 7 – Non-shipping Use

In addition to complying with CEQA, the above-described range of alternatives satisfies the requirements of paragraph VI.A.1 of the ASJ, which provides that LAHD shall consider alternatives to the Project with reduced environmental impacts, including alternative "Port-related uses" other than a shipping terminal at the China Shipping Project site and alternatives to the size magnitude, and configuration of the proposed China Shipping Project.

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 Recirculated Draft EIS/EIR (additional details regarding reasons for rejection are included in Chapter 6 of the Recirculated Draft EIS/EIR):

- Use of West Coast Ports Outside Southern California

- Expansion of Terminals in Southern California but Outside the Los Angeles Harbor District
- Lightering
- Shallower Dredge Depth
- Liquefied Natural Gas Terminal Facility
- Offsite Backlands Alternatives
- Development of New Landfills and Terminals Outside the Berth 97-109 Terminal Area and the Adjoining West Basin Area
- Other Sites in the Los Angeles Harbor District
- Narrower Wharves
- Development and Operation of Small Container Terminal

Alternatives Analyzed in the EIS/EIR

Chapter 6 of the Recirculated 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. Table 17 provides a summary of the alternatives.

Table 17 Summary of Proposed Project and Alternatives at Buildout (2030-2045)^a

	Terminal Acres	Annual Ship Calls	Annual TEUs ^d	Cranes	Total Fill in Waters of the U.S.	New Wharves
Proposed Project	142	234	1,551,000	10	2.54 acres	2,500 linear feet of new wharves
No Project Alternative^b	72	0	457,100	4 Existing cranes would be removed	1.3 acres of fill from Phase I, no new fill into waters of the U.S.	No new wharves 1,200 feet of wharf (Phase I)
No Federal Action Alternative^c	117	0	632,500	4 Existing cranes would be removed	1.3 acres of fill from Phase I, no new fill into waters of the U.S.	No new wharves 1,200 feet of wharf (Phase I)
Reduced Fill Alternative, No Berth 102 wharf	142	130	936,000	5	2.5 acres	1,575 linear feet of new wharves
Reduced Fill Alternative, No Berth 100 South	130	208	1,392,000	9	1.34 acres	2,125 linear feet of new wharves
Reduced construction and operation: Phase I construction only	72	104	630,000	4	1.3 acres	1,200 linear feet new wharves
Omni Cargo Terminal Alternative	142	364	506,467 TEUs; 17,987 Autos (in TEUs); 5,159,570 Break-Bulk Commodities (in Tons)	5	2.54 acres	2,500 linear feet of new wharves
Nonshipping Alternative: (Retail, Office, Light Industrial Land Uses)	117 Gross Acres: 277,564 ft ² of Retail Buildings; 277,564 ft ² of Office Buildings; 1.3 million ft ² of Light Industrial Buildings	0	0	0	1.3 acres of fill from Phase I, minor new fill into waters of the U.S.	No new wharves 1,200 feet of wharf (Phase I)

Notes: Alternative Maritime Power is not included in the alternatives involving wharf development at the China Shipping site to account for worst-case scenarios. Alternative Maritime Power is treated as mitigation, consistent with the ASJ.

^aThis table summarizes the major features of the proposed Project and alternatives.

^bUnder the No Project Alternative, the existing 1,200-foot-long wharf at the Berth 97-109 site would remain onsite, but the four existing cranes would be removed. The analysis in this Recirculated Draft EIS/EIR assumes: (1) the existing four A-frame cranes would be removed, (2) the wharf would remain in place but no ship berthing would occur, and (3) no terminal backlands beyond the existing 72 acres would be improved. Yang Ming would use 72 acres at Berth 100 as backlands. The Phase I-constructed bridge would be abandoned.

^cUnder the No Federal Action Alternative, the backlands (up to 117 acres) would be improved but the existing four A-frame cranes would be removed and (2) the wharf would remain in place but no ship berthing would occur. Yang Ming would use terminal acreage at Berth 100 as backlands. The Phase I-constructed bridge would be abandoned.

^dThroughput projection methodology is based on the Mercer and JWD reports (Section 1.1.3 and Appendix I)

Table 18 presents a summary of the impact analysis for the proposed Project and the Alternatives.

Table 19 presents a comparison of the Alternatives to the proposed Project.

Table 18. Summary of CEQA Significance Analysis by Alternative

Environmental Resource Area*	Proposed Project	Alternatives						
		1	2	3	4	5	6	7

DRAFT FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS
 Document considered draft until Board considers document

Aesthetics	S	L	L	S	S	S	S	M
Air Quality/Meteorology	S	S	S	S	S	S	S	S
Biological Resources	S	M	M	S	S	S	S	M
Geology	S	S	S	S	S	S	S	S
Ground Transportation	S	L	L	S	S	S	M	S
Groundwater and Soils	M	M	M	M	M	M	M	M
Hazardous Materials & Risk	L	L	L	L	L	L	L	L
Noise	S	S	S	S	S	S	S	S
Utilities/Public Services	M	M	M	M	M	M	M	M
Water Quality	S	L	L	S	S	S	S	L

Notes:

*Only environmental resources with unavoidable significant impacts or significant but mitigable impacts are included in the table and the analysis used to rank alternatives; 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

Table 19. Comparison of Alternatives* to the Proposed Project

Environmental Resource Area	Alternatives						
	1	2	3	4	5	6	7
Aesthetics and Visual	-2.0	-2.0	-1.0	-0.2	-1.2	-1.0	-2.0
Air Quality/Meteorology	-1.9	-1.8	-1.0	-0.2	-1.2	2.0	-2.0
Biological	-2.0	-2.0	-1.0	-0.5	-1.4	1.0	-1.8
Geology	-1.0	-1.0	0	0	0	0	1.0
Ground Transportation	-2.0	-2.0	-0.2	0	-1.5	0	2.0
Groundwater and Soils	-1.0	-0.4	0	-0.2	-1.0	0	-0.4
Hazards	-1.2	-1.0	-0.5	-0.2	-0.6	-0.7	1.0
Noise	-2.0	-1.6	-0.5	-0.7	-1.0	-0.2	-1.2
Utilities and Public Services	-0.4	-0.4	0	-0.1	-0.2	0	0.2
Water Quality/Sediments/ Oceanography	-2.0	-2.0	-1.0	-0.5	-1.4	1.0	-1.9
Total	-15.5	-14.2	-5.2	-2.6	-9.5	2.1	-5.1

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 less when compared with the proposed Project.

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

(1) = Impact considered to be somewhat 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).

Environmentally Superior Alternative

As shown in Table -- the No Project Alternative is deemed to be the environmentally superior alternative under CEQA, although this alternative does not meet all Project objectives.

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

One comment was received on the Recirculated Draft EIS/EIR requesting the Port analyze one additional Alternative to the proposed Project. The San Pedro and Peninsula Neighborhood Council (SP&PNC, comment 24-6) suggested that the Port analyze the use of floating wharves at the terminal. Container terminal wharves serve as a key interface between a terminal's landside operations and the waterside operations such as berthing of the container ships. The wharves must be able to support the weight of the A-Frame Cranes and its associated rail track system. In addition, the wharves must also be able to withstand the lateral forces of the container ships being acted upon by the tide, as well as the tugboats that maneuver the container vessels into position along the wharves. Due to the massing of both the cranes and the container vessels, as well as the tremendous forces exerted by the tugboats (tugboats often have main engines in excess of 5,000 horsepower), the wharves are usually constructed of reinforced concrete fixed to a pile support system. The recommendation of using floating wharves is not considered technically feasible due to the loading requirements of container terminal wharves

CEQA Findings for Alternatives Analyzed

Project Purpose:

The overall purpose of the proposed Project is to expand and optimize⁷ the cargo-handling efficiency and capacity of the Port at Berths 97-109 to address the need to optimize Port lands and terminals for current and future containerized cargo handling. This purpose would be accomplished through the construction of a marine terminal of approximately 142 acres that would accommodate an annual throughput of up to 1.5 million TEUs.

The LAHD's overall objective for the proposed Project is threefold: (1) provide a portion of the facilities needed to accommodate the projected growth in the volume of containerized cargo through the Port; (2) comply with the Mayor's goal for the Port to increase growth while mitigating the impacts of that growth on the local communities and the Los Angeles region by implementing pollution control measures, including the elements of the Clean Air Action Plan (CAAP) applicable to the proposed Project; and (3) comply with the Port Strategic Plan to maximize the efficiency and capacity of terminals while raising environmental standards through application of all feasible mitigation measures.

⁷ *To optimize* means to make as functional as possible; whereas, *to maximize* means to use to the maximum extent possible. As part of the proposed Project, the Port seeks to develop the Berth 97-109 terminal to allow the maximum cargo throughput in the most efficient manner (for example, the terminal at full buildout will be able to accommodate larger, more efficient ships). For the purposes of this document, the word *optimize* will be used; however, the environmental analysis assumes the maximum throughput levels allowed based on the terminal's physical capacity. Actual throughput levels might be lower due to changes in consumer demand patterns and/or economic conditions.

Project Objectives:

The following Project objectives were considered for the Alternatives analysis:

Establish and expand a new container facility in the West Basin to the extent required to:

- a) Optimize the use of existing land and waterways and be consistent with the overall use of allowable uses under the Port Master Plan
- b) Accommodate foreseeable containerized cargo volumes through the Port
- c) Increase container handling efficiency and create sufficient backland area for container terminal operations, including storage, transport, and on/offloading of container ships in a safe and efficient manner
- d) Improve or construct container ship berthing and infrastructure capacity where necessary to accommodate projected containerized cargo volumes through the Port
- e) Provide access to land-based rail and truck infrastructure locations capable of minimizing surface transportation congestion or delays while promoting conveyance to local and distant cargo destinations
- f) Provide needed container terminal accessory buildings and structures to support containerized cargo-handling requirements

Alternative 1: No Federal Action/No Project

Alternative 1 would utilize the terminal site constructed as part of Phase I for container storage. Because of this, the Phase I construction activities are included under Alternative 1 although the in-water Phase I elements would not be used (they would be abandoned). Alternative 1 acknowledges the completion of Phase I activities but seeks to return to pre-Phase I conditions to the maximum extent practicable through abandonment of structures and fills rather than removing them, which could require additional federal action.

Under the No Project Alternative, no further Port action or federal action would occur. The Port would take no further action to construct and develop additional backlands (other than the 72 acres that currently exist), the four existing A-frame cranes would be removed, and the existing wharf at Berth 100 would cease to be used for ship berthing and container loading and unloading operations. The bridge constructed during Phase I would be abandoned in place. USACE would not issue a permit for dredge and fill actions needed for construction of wharves at Berths 100 (south expansion) and 102 or for the second bridge. The 1.3 acres of fill added to waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit), which was fully mitigated by applying mitigation bank credit offsets and in-water construction “best management practices” (BMPs), would remain in place under Alternative 1. The fill associated with (and completed as part of) the separately approved Channel Deepening Project would not be developed as backlands.

Under the No Project Alternative, the site would continue to operate as a 72-acre container backlands area by the Yang Ming Terminal under a revocable permit. The 72 acres of backlands includes the approved acres used prior to the 2001 court injunction, as provided in the ASJ. Yang Ming would use this area as additional backlands to supplement the Berth 121-131 area.

Under the No Project Alternative, cargo ships that currently berth and load/unload at the Berth 121-131 terminal (operated by Yang Ming Lines) would continue to do so. Some of these cargo containers would be transported by yard tractors from Berths 121-131 along an internal road to the Berth 97-109 Container Terminal, where they would be sorted and stored before transportation to final destinations.

Under the No Project Alternative, up to 457,100 TEUs from the Yang Ming Terminal could be stored on the 72 acres of backlands. The Yang Ming facility currently is berth limited. Under this alternative, the Yang Ming total throughput is assumed to remain the same with or without additional land at Berths 97-109. The additional land would allow Yang Ming to operate more wheeled operations versus stacked operations. Wheeled operations are more efficient and cheaper than stacked, but terminals often are limited by their backlands area necessitating a certain amount of stacking.

No ship calls would occur at Berths 97-109 under this alternative. Additionally, because the Berth 121-131 terminal is berth limited under current and all reasonably foreseeable future conditions, the use of Berth 97-109 backlands by Yang Ming would not result in additional ship, truck, or rail trips at the Berth 121-131 terminal (Appendix I). This alternative, however, would result in daily yard tractor trips transporting the containers to and from Berths 97-109 and would require terminal equipment to stack, sort, and store containers at Berths 97-109 along an internal road connecting the two terminals.

Alternative 1 differs from the proposed Project in that container ship operations (loading and unloading), and direct truck and rail transport would not occur at the Berth 97-109 terminal. However, the Berth 97-109 backlands would be used to sort and store containers, and containers would be transported between the two terminals (Berths 121-131 and Berths 97-109) by yard equipment. The No Project Alternative would not preclude the future container terminal use of Berth 97-109 Container Terminal. Any future use, however, would need to be analyzed in a separate environmental document.

The No Project Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from yard tractors and yard equipment used at Berths 97-109 through the revocable permit to Yang Ming. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

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

Facts in Support of Finding

When compared against the CEQA baseline, the No Project Alternative would result in fewer environmental impacts than the proposed Project because its operational capacity and level of capital development would be lower. The reduced environmental impacts include: fewer aesthetic impacts (no cranes), lessened air quality impacts (less construction and operational emissions), and lessened impacts from ground traffic (no truck trips) and noise (related to reduced truck trips and reduced construction).

However, although the No Project Alternative would result in fewer unavoidable significant adverse impacts or mitigated impacts than the proposed Project, it would not meet the Project's stated needs under NEPA to maximize container efficiency and container backlands, optimize and increase accommodations for container ship berthing, or provide optimized truck-to-rail container movements (see Section 2.3.2). In addition, the No Project Alternative would not address the need to construct sufficient berthing and infrastructure capacity to accommodate foreseeable increases in containerized cargo, or provide the accessory buildings and structures at the terminal to support the anticipated

container-handling requirements. Although the No Project Alternative would include backland operations by serving as supplemental container storage for the adjacent Berths 121-131 Container Terminal, the Berth 121-131 Container Terminal is berth limited, and additional backlands would simply improve efficiency and not affect the ultimate capacity of the Berth 121-131 terminal. Because of this, the No Project Alternative would meet the stated needs to maximize container efficiency and container backlands, optimize and increase accommodations for container ship berthing, or provide optimized truck-to-rail container movements. Therefore, they are not considered to be viable project alternatives that could achieve the project objectives. It should be noted that even if terminal capacity were maximized throughout the Port, there would still be a shortfall in meeting future throughput demand.

Thus, based on the analyses in Chapter 3 of the Recirculated Draft EIS/EIR, the No Project Alternative would result in fewer environmental impacts than the proposed Project or the Reduced Project Alternative, but would not meet the overall project purpose or objectives under CEQA.

Alternative 2: No Federal Action Alternative

The No Federal Action Alternative would utilize the terminal site constructed as part of Phase I for container storage, and would further increase the backland area to 117 acres. Because of this, the Phase I construction activities are included under Alternative 2 although the in-water Phase I elements would not be used. Phase I dike, fill, and the wharf would be abandoned. Alternative 2 acknowledges the completion of Phase I activities but seeks to return to pre-Phase I conditions to the maximum extent practicable through abandonment of structures and fills rather than removing them, which could require additional federal action.

The No Federal Action Alternative includes all of the construction and operational impacts likely to occur absent further USACE permits (e.g., air emissions and traffic likely to occur without issuance of permits to construct or modify wharves and bridges, or to dredge). Alternative 2 differs from the proposed Project in that container ship operations (loading and unloading), and direct truck and rail transport would not occur at the Berth 97-109 terminal. Under Alternative 2, the Yang Ming Terminal would operate the site as a supplemental container backlands area under a revocable permit. The Berth 97-109 backlands would be used to sort and store containers, and yard equipment would transport containers between the two terminals using an internal road (Berths 121-131 and Berths 97-109). The Yang Ming facility currently is berth limited. Under this alternative, the Yang Ming total throughput is assumed to remain the same with or without additional land at Berths 97-109; however, the additional land would allow Yang Ming to use more wheeled operations versus stacked operations. Wheeled operations are more efficient and cheaper than stacked, but terminals are often limited by their backlands area necessitating a certain amount of stacking.

The No Federal Action Alternative would not include terminal features that could only be implemented when additional federal permits or funding for either construction or operation were acquired. This alternative would not allow any new dredging (beyond what was previously approved with the Channel Deepening Supplemental EIS/EIR of 2000 and for Phase I), filling, or new wharf construction. Under the No Federal Action Alternative, however, further development of backlands could occur at the Project site, which does not require a federal action. The No Federal Action Alternative would allow construction and container storage use of all upland elements (existing lands and fill areas previously approved through permits or Channel Deepening) for backlands or other purposes for up to 117 acres, including 72 acres of existing backlands, and 45 additional acres proposed to be developed as backlands under Phase II of the Project. The No Federal Action Alternative would not include development of any backlands under Phase III of the Project because, even though no federal permit is required for that

development, 12 of the 25 acres are associated with the Berth 100 south extension that would not occur without a USACE permit, and because this acreage currently is being used by Catalina Express Terminal and that use would remain in place. The westerly bridge constructed during Phase I of the proposed Project would be abandoned. No wharves beyond the wharf at Berth 100 would be improved or constructed as part of this alternative. The 1.3 acres of fill added to waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit), which was fully mitigated by applying mitigation bank credit offsets and in-water construction BMPs during Phase I, would remain in place under Alternative 2.

The LAHD would take no further action necessary to accommodate wharf operations at Berths 100-102. Rather, the four existing A-frame cranes installed in Phase I would be removed and the existing wharf at Berth 100 would not be used for container loading and unloading activities. Under the No Federal Action Alternative, up to 632,500 TEUs from the Yang Ming Terminal could be stored on the 117 acres of backlands (as presented in Appendix I). Under this alternative, the Yang Ming total throughput is assumed to remain the same with or without additional land at Berths 97-109. The additional land would allow Yang Ming to operate more wheeled operations versus a stacked operation. Wheeled operations are more efficient and cheaper than stacked, but terminals are often limited by their backlands area necessitating a certain amount of stacking. No ship calls would occur at Berths 97-109 under this alternative. Additionally, because the terminal at Berths 121-131 is berth limited, use of Berths 97-109 by Yang Ming will not result in additional ship, truck, or rail trips at the Berth 121-131 terminal. This alternative, however, would result in daily yard-tractor trips transporting the containers to and from Berths 97-109 and terminal equipment to stack, sort and store containers at Berths 97-109 along an internal road connecting the two terminals.

The No Federal Action Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from yard tractors and yard equipment used at Berths 97-109. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

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

Facts in Support of the Finding

When compared against the CEQA baseline, the No Federal Action Alternative would result in fewer environmental impacts than the proposed Project because its operational capacity would be lower and its level of capital development would be lower. These reduced environmental impacts under Alternative 2 include fewer aesthetic impacts (no cranes compared to 10 for the proposed Project), fewer air quality impacts (less construction and operational emissions), fewer ground traffic impacts (no truck trips), and fewer noise impacts (related to fewer truck trips and reduced construction).

However, although the No Federal Action Alternative would result in fewer unavoidable significant adverse impacts or mitigated impacts than the proposed Project, it would not meet the Project's stated needs under NEPA to maximize container efficiency and container backlands, optimize and increase accommodations for container ship berthing, or provide optimized truck-to-rail container movements (see Section 2.3.2). In addition, the No Federal Action Alternative would not address the need to construct sufficient berthing and infrastructure capacity to accommodate foreseeable increases in containerized cargo, or provide the accessory buildings and structures at the terminal to support the anticipated container-handling requirements. Although the No Federal Action Alternative would

include backland operations by serving as supplemental container storage for the adjacent Berths 121-131 Container Terminal, the Berth 121-131 Container Terminal is berth limited, and additional backlands would simply improve efficiency and not affect the ultimate capacity of the Berth 121-131 terminal. Because of this, the No Federal Action Alternative would meet the stated needs to maximize container efficiency and container backlands, optimize and increase accommodations for container ship berthing, or provide optimized truck-to-rail container movements. Therefore, they are not considered to be viable project alternatives that could achieve the project objectives. It should be noted that even if terminal capacity were maximized throughout the Port, there would still be a shortfall in meeting future throughput demand.

Thus, based on the analyses in Chapter 3 of the EIS/EIR, the No Federal Action would result in fewer environmental impacts than the proposed Project or the Reduced Project Alternative, but would not meet the overall project purpose or objectives under CEQA.

Alternative 3 – Reduced Fill: No New Wharf Construction at Berth 102

This alternative would be developed similar to the proposed Project except that 925 linear feet of wharf proposed at Berth 102 would not be constructed. The total length of wharf at the terminal would be 1,575 feet (i.e., the existing 1,200 feet of Berth 100 that already were constructed during Phase I and officially put into operation on June 21, 2004, plus the proposed 375-foot south extension). In addition to the 41,000 yd³ of dredge material that was disposed of at the Anchorage Road soil storage site, and the dike and fill placements that occurred under Phase I, an additional 116,000 yd³ of rock dike and 24,000 yd³ of fill behind the dike would be required for the Berth 100 south extension.

As a result of no wharf construction at Berth 102, only one additional A-frame crane would be installed for a total of five cranes at the Berth 97-109 Container Terminal (four currently exist). The total acreage of backlands under this alternative would be 142 acres, the same as the proposed Project. TEU throughput would be less than the proposed Project, with an expected throughput of 936,000 TEUs by 2030. This would translate into 130 annual ship calls at Berths 97-109 with associated 520 tugboat operations. In addition, this alternative would result in up to 2,833 daily truck trips, and up to 493 annual round-trip rail movements. Development of all other landside terminal components would be identical to the proposed Project.

The Reduced Fill Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

The Board hereby finds that Alternative 3 would not support the projected increase in throughput demand, would not maximize container-handling capacity in the West Basin and at the Project site, and would not make the best use of the Project site as a water-dependent use. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 3.

Facts in Support of the Finding

When compared against the CEQA baseline, Alternative 3 would result in fewer environmental impacts than the proposed Project because its operational capacity would be lower and its level of capital

development would be lower. These reduced environmental impacts includes fewer aesthetic impacts (5 cranes compared to 10 for the proposed Project), fewer air quality impacts (less construction and operational emissions), fewer ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips and reduced construction).

The Reduced Fill, No Berth 102 Wharf Alternative (Alternative 3) would result in fewer environmental impacts than the proposed Project due to less wharf length (1,575 feet compared to 2,500 feet for the proposed Project) and a substantially lower annual throughput (936,000 annual TEUs compared to 1.55 million annual TEUs for the proposed Project). Although Alternative 3 would have less wharf length than the proposed Project, it would result in the same loss of 2.54 acres of soft-bottom habitat as the proposed Project. Operationally, Alternative 3 would increase the number of vessel calls relative to the NEPA baseline by 130 annual ship calls but would decrease the number of ship calls compared to the 234 annual ship calls of the proposed Project. Given the Project purpose, Alternative 3 would not support the projected increase in throughput demand, would not maximize container-handling capacity in the West Basin and at the Project site, and would not make the best use of the Project site as a water-dependent use. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 3

Alternative 4 – Reduced Fill: No South Wharf Extension at Berth 100

This alternative would be similar to the proposed Project except that the proposed 375 feet of linear wharf proposed south of Berth 100 and 12 of the 25 acres of backland behind Berth 100 would not be constructed or developed. Alternative 4 includes construction and operation of 13 acres in Phase III, compared to 25 acres for the proposed Project, to better match backlands capacity with wharf capacity. The total length of wharf at the terminal would be 2,125 feet. As part of the Phase I construction, 1,200 feet of wharf at Berth 100 already have been constructed and were officially put into operation on June 21, 2004. The dredging of 41,000 yd³ of fill has already occurred as part of Phase I construction, and this material was placed at the Anchorage Road soil storage site.

This alternative would include construction of an additional 925 feet of wharf at Berth 102, to extend north of the existing wharf at Berth 100. No additional rock dike or fill would be required. Five additional A-frame cranes would be installed at Berth 102 in Phase II for a total of nine cranes at the Berth 97-109 Container Terminal (four currently exist). TEU throughput would be less than the proposed Project with an expected throughput of 1,392,000 TEUs by 2030. This would translate into 208 annual ship calls and 832 associated tugboat trips. In addition, this alternative would result in up to 4,472 daily truck trips, and up to 734 annual round-trip rail movements. With 130 acres of backlands, compared to the proposed Project, slightly less backland would be developed under Alternative 4.

The Reduced Fill, No South Wharf Extension Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

The Board hereby finds that Alternative 4 would not result in substantially fewer environmental impacts but would result in decreased container-handling capacity compared to the proposed Project. Alternative 4 would not support the projected increase in throughput demand, would not maximize container-handling capacity in the West Basin and at the Project site, and would not make the best use

of the Project site as a water-dependent use. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 4.

Facts in Support of the Finding

When compared against the CEQA baseline, Alternative 4 would result in slightly fewer environmental impacts than the proposed Project because its operational capacity and its level of capital development would be slightly lower. These reduced environmental impacts include fewer aesthetic impacts (9 cranes compared to 10 for the proposed Project), slightly fewer air quality impacts (less construction and operational emissions), slightly fewer ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips and reduced construction).

The Reduced Fill, No Berth 100 Southern Wharf Extension Alternative (Alternative 4) would result in slightly fewer environmental impacts than the proposed Project due to less wharf length (2,125 feet compared to 2,500 feet for the proposed Project) and a slightly lower annual throughput (1,392,000 annual TEUs compared to 1.55 million annual TEUs for the proposed Project). Operationally, Alternative 4 would increase the number of vessel calls relative to the NEPA baseline by 208 annual ship calls but would decrease the number of ship calls compared to the 234 annual ship calls of the proposed Project. Alternative 4 would handle approximately 10 percent fewer TEUs than the proposed Project and reduce the loss of soft-bottom habitat by approximately 50 percent compared to the proposed Project. Although Alternative 4 provides almost as much throughput as the proposed Project with approximately half the loss of soft-bottom habitat as the proposed Project, there is a need to maximize terminal capacity to meet anticipated container demand in the Port, given the shortfall in container terminal capacity projected by 2030. As discussed in Section 1.1.3, the Port of Los Angeles anticipates that approximately 17.6 million TEUs could come through the Port of Los Angeles in 2020, and up to 31.6 million TEUs by 2030. Capacity modeling of container terminals at the Port shows that even with the expansion and modernization of terminals that were assumed, including the proposed Project, throughput at the Port will be constrained at 22.4 million TEUs starting approximately in 2030. As a consequence, a significant shortfall in the capacity of the container terminal in the Port of Los Angeles is expected and there is a need to maximize and optimize capacity at all terminal sites in the Port. However, given that all soft-bottom habitat losses would be fully mitigated through the application of mitigation bank credits, and given the need to meet the Project objective to establish and maximize the cargo-handling efficiency and capacity at Berths 97-109 in the West Basin to address the need to optimize Port lands and terminals for current and future containerized cargo handling, Alternative 4 would not result in substantially fewer environmental impacts but would result in decreased container-handling capacity compared to the proposed Project. As a consequence, the proposed Project would better accomplish the Project goals and objectives than would Alternative 4

Alternative 5 – Reduced Construction and Operation: Phase I Construction Only

Under Alternative 5, the Phase I terminal (completed in 2003 as allowed by the ASJ and the USACE permit kept in place by the federal Settlement Agreement) would operate at levels similar to today. The total acreage of backlands under this alternative would be 72 acres. Existing equipment and facilities on the proposed Project site would remain, including four A-frame cranes along the wharf, the bridge connecting Berths 121-131 to Berths 97-109, the paved backlands used for container storage, terminal and gate buildings, mobile equipment used to handle containers, and 1,200 linear feet of wharves and the 1.3 acres of fill associated with the wharf construction. Under this alternative, however, Phase II and Phase III construction elements would not be constructed, including the Berth 102 wharf and the

Berth 100 south extension construction, six additional cranes, the second bridge connecting Berths 97-109 and Berths 121-131, and 70 acres of additional backlands.

Under Alternative 5, China Shipping would operate the terminal under a 40-year lease. The lease would include AMP and terminal equipment provisions consistent with the ASJ. TEU throughput would be less than the proposed Project with an expected throughput of 630,000 by 2030. This would translate into 104 annual ship calls at Berths 97-109 and 416 associated tugboat trips. In addition, this alternative would result in up to 1,796 daily truck trips, and up to 332 annual round-trip rail movements.

The Reduced Construction and Operation Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

The Board hereby finds that Alternative 5 would not support the projected increase in throughput demand, would not maximize container-handling capacity in the West Basin and at the Project site, and would not make the best use of the Project site as a water-dependent use. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 5.

Facts in Support of the Finding

When compared against the CEQA baseline, Alternative 5 would result in fewer environmental impacts than the proposed Project because its operational capacity and its level of capital development would be lower. These reduced environmental impacts include fewer aesthetic impacts (4 cranes compared to 10 for the proposed Project), fewer air quality impacts (less construction and operational emissions), fewer ground traffic impacts (fewer truck and rail trips), and fewer noise impacts (related to fewer truck trips and reduced construction).

The Reduced Construction and Operation: Phase I Construction Only Alternative (Alternative 5) would result in slightly fewer environmental impacts than the proposed Project due to less wharf length (1,200 feet compared to 2,500 feet for the proposed Project) and a substantially lower annual throughput (630,000 annual TEUs compared to 1.55 million annual TEUs for the proposed Project). Alternative 5 would result in the loss of 1.3 acres of soft-bottom habitat, which is greater than the NEPA baseline (no loss of soft-bottom habitat) but less than the loss under the proposed Project (2.54-acre loss of soft-bottom habitat). Operationally, Alternative 5 would result in fewer ship calls compared to 234 annual ship calls of the proposed Project. Given the project purpose, Alternative 5 would not support the predicted increase in throughput demand, would not maximize container-handling capacity in the West Basin and at the Project site, and would not make the best use of the Project site as a water-dependent use. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 5.

Alternative 6 – Omni Cargo Terminal

The Omni Cargo Terminal Alternative would convert the existing site into an operating omni cargo-handling terminal similar to the Pasha Stevedoring & Terminals L. P. (Pasha) currently operating at Berths 174-181. The primary objective of the Omni Cargo Terminal Alternative is to provide increased

and diversified cargo-handling capabilities by expanding and improving existing terminal facilities. The omni terminal would handle containers, Roll-On-Roll-Off and break-bulk commodities. Roll-On-Roll-Off goods include automobiles. Break-bulk commodities include factory equipment, forest products, bundles of steel, and other bulky material. This alternative does not meet the project objective to accommodate foreseeable containerized cargo volumes through the Port and to increase container handling efficiency and create sufficient backland area for container terminal operations, including storage, transport, and on/offloading of container ships in a safe and efficient manner.

This alternative would develop 2,500 feet of wharves (including the 1,200-foot wharf at Berth 100 wharf completed as part of Phase I, the 925-foot wharf at Berth 102 as part of Phase II, and the 375-foot wharf south extension at Berth 100 as part of Phase III), five new A-frame cranes (one would be added to the existing four A-frame cranes installed as part of Phase I), and backlands occupying 142 acres (the same as under the proposed Project).

Annual throughput volumes at the proposed omni terminal would vary by commodity: 506,467 container TEUs; 17,987 auto TEUs; and break-bulk commodities totaling 5,159,570 tons. Under this alternative, 364 annual ship calls and 1,456 tugboat trips would be required. In addition, this alternative would result in up to 3,982 truck trips, and up to 245 annual round-trip rail movements.

A new 250,000- to 350,000-ft² transit storage shed would be constructed onsite, as well as new entrance and exit gate facilities, heavy lift pad, utility relocations, and possible realignment of existing railroad tracks. Development of this alternative would take place proportionately over three phases similar to those of the proposed Project.

Demolition and/or reconstruction of existing backlands facilities such as exit gate, maintenance building, operations building, extensive filling, grading, fire protection system, storm drains, sewers, lighting, electrical, and paving would be completed to match the needs of the proposed omni terminal.

Hours of operation would be from 8:00 a.m. to 5:00 p.m., Monday through Friday. Terminal operations would involve the mooring of up to nine vessels per month. It is anticipated that each ship would take 31 to 52 hours to unload. Employment would vary by day and would largely depend upon the activities at the facility. During vessel berthing operations, the site would require approximately 45 employees. Approximately two people would be onsite for daily operations when no vessels are at the terminal.

The Omni Terminal Alternative assumes implementation of existing and future CAAP measures. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment. In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

The Board hereby finds that Alternative 6 would provide substantially less container throughput than the proposed Project while resulting in the same or slightly higher operational impacts. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 6.

Facts in Support of the Finding

When compared against the CEQA baseline, Alternative 6 would result in environmental impacts generally similar to those of the proposed Project because the amount of backlands and wharves would

be the same. However, the intensity of environmental impacts of Alternative 6 would differ slightly from the proposed Project depending on the type of impact. As an example, Alternative 6 would result in reduced aesthetic impacts (5 cranes compared to 10 for the proposed Project) but slightly greater air quality impacts from construction (due to the need to construct additional terminal features).

The Omni-Cargo Alternative (Alternative 6) would result in approximately the same or slightly greater environmental impacts than the proposed Project because it would have the same terminal size (142 acres) and the same wharf length (2,500 feet) as the proposed Project. However, Alternative 6 would have different operational characteristics than the proposed Project. Annual container throughput under Alternative 6 (506,467) would be substantially lower than the proposed Project, but because it would also accommodate break-bulk cargo and automobiles, it would result in greater annual ship calls than the proposed Project (Alternative 6 would result in 364 annual ship calls). Alternative 6 would result in the loss of 2.54 acres of soft-bottom habitat, which is the same amount as the proposed Project. Although Alternative 6 would also handle other cargo, automobiles and break-bulk commodities, the projected terminal capacity shortfall applies to container terminal capacity, not bulk commodities. Therefore, given the project purpose, Alternative 6 would provide substantially less container throughput than the proposed Project while resulting in the same or slightly higher operational impacts. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 6.

Alternative 7 – Non-shipping Use

A Non-shipping use alternative normally would not be evaluated in detail in an EIS/EIR for the Port because such use of the site would not be consistent with the Project objectives, with the maximum utilization of Port lands for Port-related uses, with the Port Master Plan for the Project site, or with Regulations and Guidelines for Development Projects (LAHD, 2002a).⁸ However, the Non-shipping Use Alternative is included for detailed analysis in this Recirculated Draft EIS/EIR pursuant to the terms of the ASJ, which states that the Draft EIS/EIR shall:

...consider alternatives to the China Shipping project with reduced impacts, including alternative “Port-related uses” other than a shipping terminal at the site of the China Shipping Project...

Alternative 7 would utilize the terminal site constructed as part of Phase I for container storage. Because of this, the Phase I construction activities are included under Alternative 7 although the in-water Phase I elements would be abandoned. Alternative 7 acknowledges the completion of Phase I activities but seeks to return to pre-Phase I conditions to the maximum extent practicable through abandonment of structures and fills rather than removing them, which could require additional federal action.

The Non-shipping Use Alternative would convert the existing site into a “Regional Center,” which would generally be considered as a mixed-use center with major retail tenants serving as “anchor” uses; office park uses; and light industrial uses supporting maritime activities such as machine shops, marine vessel chandlers, and marine supply stores. In addition, a public dock would be constructed to support onsite retail and restaurant uses. This dock would be constructed to provide service and access to

⁸ According to the Port Master Plan Regulations and Guidelines for Development Projects that regulate the planned development of the Project site: “*the Port is responsible for modernizing and constructing necessary facilities to accommodate deep-draft vessels and to accommodate the demands of foreign and domestic waterborne commerce and other traditional water dependent and related facilities...*” and “*...the highest priority for any water or land area use within the jurisdiction of the Port of Los Angeles shall be for developments which are completely dependent on such harbor water areas and/or harbor land areas for their operations...*” (LAHD, 2002a)

smaller watercraft (such as small boats, wave runners, and kayaks). The public dock would likely be a floating dock with access ramps connected to the existing wharf or adjacent area to allow recreational users access to the Regional Center and would require a permit from the USACE (under the River and Harbor Act) prior to construction. Hours of operation for the Non-shipping Use Alternative would generally be 8:00 a.m. to 10:00 p.m., Monday through Friday, and 10:00 a.m. to 2:00 a.m. on the weekends.

Similar to the proposed Project, this alternative could be developed proportionally over three phases. Existing backlands uses and facilities on the 117-acre site would have to be demolished because they would not be consistent with the alternative use. The 1.3 acres of fill added to waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit) and the bridge over the Southwest Slip, would remain in place under Alternative 7. The fill in the Southwest Slip would continue to occur as part of the approved Channel Deepening Project. The construction of berths would continue to occur, but berths would be developed to support small watercraft only.

This alternative would be generally consistent with the Regional Center uses as described in the *City of Los Angeles General Plan Long Range Land Use Diagram, West/Coastal Los Angeles* (February 2003). A Regional Center is defined in the City of Los Angeles General Plan as follows:

A focal point of regional commerce, identity and activity and containing a diversity of uses such as corporate and professional offices, residential, retail commercial malls, government buildings, major health facilities, major entertainment and cultural facilities, and supporting services. Generally, different types of Regional Centers will fall within the range of floor area ratios from 1.5:1 to 6.0:1. Some will only be commercially oriented; others will contain a mix of residential and commercial uses. Generally, Regional Centers are characterized by 6- to 20-stories (or higher). Regional Centers are usually major transportation hubs.

Three general land uses are included in this alternative: retail, office, and light industrial uses. Floor area ratios (FAR) and land use allocation percentages were assumed based on their potential viability in the West Basin area, and the locations and sizes of other similar uses in that part of the City. Retail uses were assumed to make up approximately 15 percent of the 117-acre site with a FAR of 0.6:1 (60 percent). Office uses would also be approximately 15 percent of the site with a FAR of 0.4:1 (40 percent). Light industrial uses would be developed on approximately 70 percent of the site with a FAR of 0.3:1 (30 percent). FARs for all proposed land uses would be below the ranges established in the General Plan.

Anchor retail uses could consist of nationally known department stores and/or “big-box” retail tenants. Other “in-line” retail uses might include smaller specialty retail shops and/or service and restaurant uses that would support the office and light industrial uses proposed onsite, as well as the adjacent area. Office uses would potentially be the local offices of major Port tenants, while light industrial uses would be centered on supporting maritime activities. Alternative 7 would have a total building floor space of 1,850,428 ft² for the 117-acre site. Based on application of parking ratios from the Institute of Transportation Engineers (ITE), the maximum parking requirement would be approximately 3,812 spaces. (Shared parking has not been assumed, but it could reduce the requirement.) For planning and design purposes, a parking space would use approximately 370 ft², which accounts for actual parking spaces, drive aisles, landscaping, and other parking lot circulation space. The required 3,812 parking spaces would occupy approximately 1,410,440 ft² of space. The remaining space on the site would be reserved for public open space and landscaped areas (outside the parking lots).

This alternative would result in up to 24,000 additional daily trips to and from the site by 2030. Major access to the site would occur at the signalized intersections of Harbor Boulevard/Swinford Street-I-110 and SR-47 ramps, Pacific Avenue/Front Street, and John S. Gibson Boulevard/Channel Street. Internal roadways would serve these access locations from the site.

In addition, any future Portwide CAAP measure would be applied to this alternative.

Finding

The Board hereby finds that Alternative 7 would not accommodate any container throughput and would actually prevent a water-dependent use that would support cargo handling at the project site, it would not achieve any of the project goals. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 6.

Facts in Support of the Finding

When compared against the CEQA baseline, Alternative 7 would result in different environmental impacts than those associated with the proposed Project because it is a development project rather than a cargo-handling project. In some instances, impacts would be less apparent than those of the proposed Project, such as aesthetics or potential health risks. Alternative 7 would not require A-frame cranes and, as such, would not result in view blockage impacts such as those of the proposed Project (the A-frame cranes installed during Phase I would be removed). Alternative 7 would not require diesel-powered oceangoing vessels and container trucks during operations, and as such, would result in a substantially lower potential for diesel particulate matter (DPM)-related health risks, when compared to the proposed Project. Traffic generated by Alternative 7, however, would adversely affect more intersections than the proposed Project prior to implementation of mitigation measures.

The Nonshipping Alternative (Alternative 7) would result in fewer environmental impacts than the proposed Project because it would have fewer in-water impacts associated with the abandoned Phase I wharf compared to 2,500 feet of wharf for the proposed Project, and no annual throughput or associated activities. Because Alternative 7 would not accommodate any container throughput and would actually prevent a water-dependent use that would support cargo handling at the project site, it would not achieve any of the project goals. As a result, the proposed Project would better accomplish the Project goals and objectives compared to Alternative 7.

Summary

Based on the alternatives discussion provided in the Final EIR and the information above, the Board determines that the Proposed Project is the only feasible alternative that best meets project objectives maximizing Port efficiency and capacity for handling containerized cargo, taking into account environmental and economic factors.

Table 20: Comparison of Air Quality Impacts Associated With Project Alternatives

Comparison Of Air Quality Impacts Associated With Project Alternatives								
Air Quality Impact	Mitigated Projects							Alt 7
	PP	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	
AQ-3 Operational Emissions								
VOC	S	S	S	S	S	S	S	S
CO	S	S	S	S	S	S	S	S
NO _x	S	S	S	S	S	S	S	-
SO _x	S	S	S	S	S	S	S	-
PM ₁₀	S	-	-	S	S	S	S	S
PM _{2.5}	S	S	S	S	S	S	S	-
AQ-7 Toxic Air Contaminants								
Cancer Risk – Residential	S	-	-	-	S	-	S	-
Chronic Hazard Index – Residential	-	-	-	-	-	-	-	-
Acute Hazard Index – Residential	S	-	-	S	S	S	S	-

Key:
S Significant impact
- Less than significant impact
PP Proposed Project

Notes:

- There are no construction activities for Alternative 5 Phases II and III.
- For **Impact AQ-3**, the significance determinations vary by study year (2005, 2010, 2015, 2030, and 2045). The impact is designated significant in this table if it is significant for any year, even if it is less than significant for some years.

Table 21: Maximum Health Impacts Associated With The Proposed Project and Alternatives With Mitigation, 2004-2073

Health Impact	Receptor Type	Proposed Project	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Significance Threshold
		CEQA Increment								
Cancer Risk	Residential	11	0.3	0.4	8.4	11	7.1	83	less than significant	10 in a million
	Occupational	13	4.6	3.3	10	13	8.8	76		
	Sensitive	6.6	0.1	0.2	4.6	6.2	3.7	24		
	Student	0.2	0.003	0.0004	0.1	0.2	0.1	0.7		
	Recreational	20	2.2	1.5	16	19	13	99		
Chronic Hazard Index	Residential	0.06	0.01	0.01	0.05	0.06	0.04	0.14	less than significant	1
	Occupational	0.32	0.24	0.2	0.28	0.3	0.3	0.62		
	Sensitive	0.03	0	0.01	0.02	0.03	0.02	0.05		
	Student	0.03	0	0.01	0.02	0.03	0.02	0.05		
	Recreational	0.28	0.1	0.09	0.23	0.22	0.21	0.55		
Acute Hazard Index	Residential	1.09	0.16	0.15	1.11	1.09	1.11	1.08	less than significant	1
	Occupational	1.68	0.28	0.25	1.97	1.68	1.96	1.69		
	Sensitive	0.91	0.11	0.11	0.9	0.91	0.9	0.9		
	Student	0.91	0.09	0.11	0.9	0.91	0.9	0.9		
	Recreational	1.4	0.21	0.19	1.28	1.4	1.27	1.32		

IV. Statement of Overriding Considerations

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

Aesthetics

The proposed project would result in significant unavoidable impacts aesthetics due to the presence of cranes which will block views of the Vincent Thomas Bridge, a designated local landmark, from a number of viewsheds (Impact AES-2).

In views from the Main Channel and the recreational and commercial areas along its western banks, the presence of the proposed Project would detract from views toward the Vincent Thomas Bridge. As indicated by a comparison of the baseline view and with the visual simulation of the proposed Project in the same view, cranes would be visible in the area behind the western span of the bridge and would tend to visually merge with the bridge, substantially detracting from the clarity of its form, and diminishing its role as the gateway landmark of the Port. This would be considered a significant impact.

In views from Channel Street and other nearby hillside residential areas, review of the simulation indicate that the presence of the 10 cranes in proximity to the bridge would compete visually with the bridge and would diminish the role of the bridge as the focal point of the view. In addition, for the very large number of residential viewers and travelers on Channel Street who see this view, the presence of the 10 large cranes would substantially diminish the open panorama that existed during the baseline period, which is considered a significant impact.

The Port will implement mitigation measures for direct impacts that will substantially reduce the impact, however, the impact (AES-1) would still remain significant and unavoidable.

As provided in the Findings above, there will also be cumulative aesthetic construction and operational impacts (see Cumulative Impact AES-1, AES-2, and AES-4) that would remain significant and unavoidable

Air Quality:

The proposed project would result in significant unavoidable impacts to air quality during construction and operation even with the adoption and implementation of mitigation measures. Specifically, construction emissions would exceed all SCAQMD thresholds both with and without mitigation in Phase I and NO_x , SO_x , PM_{10} and $\text{PM}_{2.5}$ in Phases II and III (Impact AQ-1 and AQ-2). In addition, operation emissions would exceed daily SCAQMD thresholds for all years both with and without mitigation (Impacts AQ-3 and AQ-4). The proposed Project would also result in a residential cancer risk of 11 in a million which exceeds the 10 in a million threshold and an acute hazards index for residential receptors of 1.09 which exceeds the 1.0 threshold (Impact AQ-7). Due to lack of clear

regulatory guidance, the Port adopted for this project a no net increase significance criteria for GHG emissions. Impacts from GHG emissions would be significant for both construction and all years of operation (Impact AQ-9). The Port will implement mitigation measures for direct impacts that will substantially reduce impacts, however, the impacts would still remain significant and unavoidable (Impacts AQ-1, AQ-2, AQ-3, AQ-4, AQ-7 and AQ-9).

As provided in the Findings above, there will also be cumulative air quality construction and operational impacts (see Cumulative Impact AQ-1 through AQ-4, AQ-6, AQ-7 and AQ-9) that would remain significant and unavoidable.

Biological Resources:

The operation of the proposed Project in the West Basin has the potential to result in accidental spills or to introduce non-native species into the harbor that could disrupt local biological communities. Accidental spills of fuel or other vessel fluids during operation could occur as a result of a vessel collision, although the likelihood is considered remote due to the use of Port Pilots to navigate the Harbor, because of the requirement that vessels travel in the Harbor at slow speeds, and due to the use of tugs to slowly guide vessels to and from the berths. SPCC regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill and neutralize the potential harmful impacts. However, container shipping vessels hold larger amounts of fuels than construction-related vessels. If an accident occurs and fuels are spilled into Harbor or ocean waters, the fuel could harm biological resources, depending on the extent of the spill. Such a vessel spill would be considered a significant impact due to the potential for harm to biological resources.

The amount of ballast water discharged into the West Basin 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. These vessels would come primarily from outside the EEZ and would be subject to regulations to minimize the introduction of non-native species in ballast water. In addition, container ships coming into the Port 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 Port would be unlikely to contain non-native species but is still a possibility. The proposed Project in the West Basin would result in an increase of 234 vessels per year (compared to the CEQA baseline ships calls of zero), which represents an approximately 8 percent increase in vessel traffic compared to the total number of vessels entering the Port (approximately 2,850 vessels in 2004). 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, which 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 Port will implement mitigation measures for direct impacts that will substantially reduce impacts, however, the impacts would still remain significant and unavoidable (Impacts BIO-4b and BIO-4c). Therefore, as provided in the findings above for Impact Impacts BIO-4b and BIO-4c, accidental spills

and the introduction of invasive species in ballast water or on the hulls of ships are significant, unavoidable impacts.

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

Geology:

In regards to geology, the project site lies in the vicinity of the Palos Verdes Fault Zone. Strands of the fault may pass beneath the perimeter and immediately west of the proposed Project area, in the vicinity of Pier 400. Strong-to-intense ground shaking, surface rupture, and liquefaction could occur in these areas, due to the location of the fault beneath the proposed Project area and the presence of water-saturated hydraulic fill. An earthquake within this fault zone could cause strong-to-intense ground shaking, and surface rupture. As discovered during the 1971 San Fernando Earthquake and the 1994 Northridge Earthquake, existing building codes are often inadequate to protect engineered structures from hazards associated with liquefaction, ground rupture, and large ground accelerations. Consequently, designing new facilities based on existing building codes may not prevent significant damage to structures from a major or great earthquake on a nearby fault. Therefore, as provided in the findings above for Impact GEO-1a/1b and GEO-2a.2b, seismic hazards related to future major or great earthquakes are significant, unavoidable impacts.

As provided in the Findings above, there will be cumulative geology impacts (See Cumulative Impact GEO-1 and GEO-2) that would remain significant and unavoidable.

Ground Transportation:

The proposed Project would cause an increase in either the number of trains or the amount of auto and truck traffic; however, the increase in auto and truck traffic would only affect some of the at-grade crossings. In the case of this proposed Project, the affected at-grade crossings are at Avalon Boulevard and Henry Ford Avenue. Rail activity causes delay at at-grade crossings where the trains pass and cause auto and truck traffic to stop. The amount of delay is related to the length of the train, the speed of the train and the amount of auto and truck traffic that is blocked. Between the proposed Project rail yards and the beginning of the corridor, there are two local grade crossings (Avalon Boulevard and Henry Ford Avenue). An additional train would result in additional vehicle delay at the two crossing locations. The added average vehicle delay would range up to a maximum of 97 seconds per vehicle. Average vehicle delay is the average of all vehicles at the crossing during the assessed timer period, during the time the train passes and the gate is going down, is down and is rising back up. Thus, some vehicles will not experience any delay since they will arrive just as the gate is rising and some will experience more delay if they arrive just as the gate if coming down at the beginning of the crossing. Based on the threshold of significance of 55 seconds of average vehicle delay, the project would have a significant impact at both locations (Impact TRANS-5).

As provided in the Findings above, there will be cumulative ground transportation impacts (see Cumulative Impact TRANS-1, TRANS-4 and TRANS-5) that would remain significant and unavoidable.

Noise:

The proposed Project would result in significant noise impacts during construction (NOI-1). Construction noise levels for the China Shipping project would cause more than 5-dBA increases over the estimated 2001 ambient noise levels at sensitive receivers in the Knoll Hill and Pacific Avenue neighborhoods. This would be a significant impact (Impact NOI-1). The construction activities involved in the development of the backlands areas would cause significant temporary and periodic noise level increases above existing ambient noise levels in the Knoll Hill and Front Street neighborhoods. The construction activities at Berths 100 and 102 are estimated to approach and exceed the estimated 2001 ambient noise levels. Considering the distances between the construction noise sources and receivers, the standard controls, and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase.

The Port will implement mitigation measures for direct impacts that will substantially reduce impacts, however, the impacts would still remain significant and unavoidable (Impacts NOI-1). Therefore, as provided in the findings above for Impact NOI-1, noise from construction is a significant, unavoidable impact.

The proposed Project would result in significant noise impacts during operation (NOI-3). Operational noise levels for the China Shipping project would cause more than 5-dBA increases over the estimated 2001 ambient noise levels at sensitive receivers in the Knoll Hill and Pacific Avenue neighborhoods. This would be a significant impact (Impact NOI-3). Operational noise levels would cause future ambient noise levels to be greater than 5 dBA above the 2001 baseline CNEL at receivers on the east side of Knoll Hill and sensitive receivers located west of Front Street and south of Vincent Thomas Bridge. These receivers would experience a significant noise impact from operations. Residual impacts would be significant due to the uncertain feasibility of erecting noise barriers at the private property to mitigate construction noise impacts.

The Port will implement mitigation measures for direct impacts that will substantially reduce impacts, however, the impacts would still remain significant and unavoidable (Impacts NOI-2). Therefore, as provided in the findings above for Impact NOI-3, noise from construction is a significant, unavoidable impact.

As provided in the Findings above, there will be cumulative noise impacts (See Cumulative Impact NOI-1 and NO-3) that would remain significant and unavoidable.

Water Quality Sediments and Oceanography:

In regards to impacts on water quality, stormwater runoff from the project site could contain particulate debris from operation of the project facilities. Discharges of stormwater would comply with the NPDES discharge permit limits. However, there is potential for an increase in incidental spills and illegal discharges at the facilities and due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore as provided in the findings above for WQ-1e, the impact to water quality from in-water vessel spills, discharges and leaching is significant under CEQA.

The Port will implement mitigation measures for direct impacts that will substantially reduce impacts, however, the impacts would still remain significant and unavoidable (Impacts WQ-1e). Therefore, as

provided in the findings above for Impact WQ-1e, potential discharges to the harbor waters are a significant, unavoidable impact.

As provided in the Findings above, there will be cumulative water quality impacts (See Cumulative Impact WQ-1) that would remain significant and unavoidable.

Project Benefits

The proposed project offers several benefits that outweigh the unavoidable adverse environmental effects of the project. The Board of Harbor Commissioners adopts the following Statement of Overriding Considerations. The Board recognizes that significant and unavoidable impacts will result from implementation of the Project, as discussed above. Having (i) adopted all feasible mitigation measures, (ii) rejected as infeasible alternatives to the Project discussed above, (iii) recognized all significant, unavoidable impacts, and (iv) balanced the benefits of the Project against the Project's significant and unavoidable impacts, the Board hereby finds that the benefits outweigh and override the significant unavoidable impacts for the reasons stated below.

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

- **Fulfills the Amended Stipulated Judgment (ASJ).** Board Approval of the proposed Project, based upon the EIR, would satisfy the Port's obligations under paragraphs VI and VIII of the Amended Stipulated Judgment, filed June 14, 2004, in *Natural Resources Defense Council, Inc., et al. v. City of Los Angeles, et al.*, Los Angeles Superior Court Case No. BS070017 (ASJ), including:
 - LAHD shall prepare a Project-specific EIR evaluating the impacts of construction and operation of the three phases of the proposed Berth 97-109 Container Terminal improvements. The EIR specifically will:
 - Evaluate all Project-specific and cumulative impacts from the proposed Project alone, and not as part of any larger West Basin project or other projects (ASJ, paragraph VI.A.1);
 - Assess mitigation measures to reduce those identified impacts(*Id.*);
 - Consider alternatives to the China Shipping Project with reduced environmental impacts, including alternative "Port-related uses" other than a shipping terminal at the China Shipping Project site and alternatives to the size, magnitude, and configuration of the proposed China Shipping Project (*Id.*)
 - Aesthetic impacts, on and off the Port lands, from the terminal and its activities at Berths 97-109 including, but not limited to, the cranes at those berths (including cumulative aesthetics impacts off Port lands) shall be evaluated (*Id.*);
 - LAHD shall prepare and distribute a new NOP, conduct and complete a new scoping process, circulate a new Draft EIR for public and agency review, and complete and certify the EIR addressing Berth 97-109 improvements (*Id.*);

- The baseline condition on which changes to the environment would be evaluated will assume no improvements historically onsite (zero) or conditions prior to approval of the lease in March 2001 (ASJ, paragraph VI.A.2);
- The EIR shall contain an evaluation of impacts in the various resource categories to the Port, the surrounding communities of San Pedro and Wilmington, as well as the South Coast Air Basin. The EIR will set forth mitigation measures for any impacts that are potentially significant in the following categories.
 - Geology, seismicity, and topography
 - Groundwater, soils, and sediments
 - Meteorology and air quality
 - Toxic emissions and risk
 - Hydrology, water quality, and oceanography
 - Biota and habitats
 - Ground transportation and circulation
 - Marine vessel transportation
 - Noise
 - Public health and safety
 - Public services
 - Energy
 - Utilities
 - Land use
 - Aesthetics, visual resources, and light and glare
 - Recreation
 - Cultural resources
 - Environmental justice (ASJ, paragraph VI.A.3);
- LAHD shall require, as mitigation, all topicks and sidepicks (shoreside loading equipment) employed at the Berth 97-109 Container Terminal to use emulsified diesel fuel and diesel oxidation catalysts if these fuels are found to be technically feasible as specified in the ASJ and can be safely implemented (ASJ, paragraph VIII.A.1);
- LAHD shall require, as mitigation, the terminal operator to phase-in the use of alternative-fuel tractors such that by September 30, 2004, all tractors would be alternative-fuel tractors, unless these tractors are not technically feasible in accordance with the terms of the ASJ (*Id.*);
- LAHD shall install two low-profile cranes at Berth 102 to be employed if Berth 102 is constructed and if feasible in accordance with the terms of the ASJ. If additional cranes are required, they also will be low-profile cranes, as feasible in accordance with the terms of the ASJ. (ASJ, paragraph VIII.A.2);
- LAHD shall install, as mitigation, necessary electrical infrastructure to provide shoreside power for ship hoteling (Alternative Maritime Power [AMP]) and cause the retrofitting of China Shipping marine container ships to accommodate the use of AMP while hoteling (ASJ, paragraph VIII.A.3);

- LAHD shall require, as mitigation, that two China Shipping container ships be retrofitted to accept shoreside electrical power by August 2004, three ships be retrofitted for AMP by January 2005, and four ships retrofitted for AMP by March 31, 2005. In addition, LAHD shall require that 30 percent of ships docking at Berths 97-109 use shoreside electric power for hoteling from August 1, 2004, to January 1, 2005, 60 percent from January 1, 2005, through July 1, 2005, and 70 percent after July 1, 2005 (*Id.*).
 - LAHD shall evaluate the feasibility and emissions benefits of using available grades of marine fuel with 2,000 ppm or less sulfur content in commercial container vessels when in coastal waters and at berth.(ASJ, paragraph VIII.A.4.);
 - LAHD shall complete a traffic study by May 2003 and implement needed mitigation within 30 days after the study is complete. LAHD also shall prepare and implement a Traffic Mitigation Plan for San Pedro and Wilmington within 3 months of completing the ongoing Portwide traffic study (ASJ, paragraph VIII.A.5);
 - LAHD shall fund additional air quality and community aesthetic mitigation, totaling \$50 million (in five annual installments of \$10 million), to mitigate environmental and other effects of Port operations (ASJ, paragraph VIII.B).
- **Fulfills Port legal mandates and objectives.** The proposed Project would fulfill the Port’s Tidelands Trust to promote and develop commerce, navigation and fisheries, and other uses of statewide interest and benefit including industrial, and transportation uses. The Coastal Act identifies the Port as an essential element of the national maritime industry and obligates the Port to modernize and construct necessary facilities to accommodate deep-draft vessels and to accommodate the demands of foreign and domestic waterborne commerce and other traditional and water dependent and related facilities in order to preclude the necessity for developing new ports elsewhere in the state. Further the Coastal Act provides that the Port should give highest priority to the use of existing land space within harbors for port purposes, including, but not limited to navigational facilities, shipping industries and necessary support and access facilities. The project would also meet the Mayor’s goal and the Port’s strategic objectives including the goal to “grow the Port green” which for this project includes maximizing the efficiency and the capacity of facilities, including mitigation measures that adhere to and/or exceed CAAP requirements, maintaining financial self-sufficiency through the long term lease while raising environmental standards and protecting for public health. The strategic plan also calls for developing more and higher quality jobs. The Proposed Project provides significant high quality operational and construction employment while still providing for long-term air quality improvements as provided below.
 - **Includes energy efficiency in building/construction/operation.** The proposed Project includes large-scale application of green design principles and new technology including a LEED certified “Gold” building, the highest LEED standard building in the Port, and new electric technology including electric RTGs and an electric yard tractor demonstration project. The proposed Project includes construction of a Leadership in Energy and Environmental Design (LEED) certified “Gold” administration building and other efficiency measures including: use of compact fluorescent light bulbs, conducting third-party energy audits, use of solar panels on the main terminal building, implementing recycling and planting trees around the main building. LEED-certified buildings will be more energy efficient, thereby reducing GHG emissions compared to a conventional building design (EIS/EIR Section 3.2)

- **Implements the San Pedro Bay Clean Air Action Plan (CAAP).** Project-specific standards implemented through CEQA are one of several mechanisms for meeting CAAP requirements (see CAAP Executive Summary p. 23). For Project Specific Standards identified in the CAAP, the project meets the 10 in a million excess residential cancer risk threshold (see below), implements feasible mitigation measures to meet SCAQMD significance thresholds for facility operation (see Impacts AQ-1 through AQ-9 in Section 3.2 of the Recirculated Draft EIS/EIR and Findings above for feasibility discussion). The Project is also in compliance with the CAAP source specific standards for ships as described in Final EIR and the Port's Sustainable Construction Guidelines. (see Figures 1, 2 and 3)
- **Mitigates estimated Health Risk from terminal operation.** Estimated health risk of Toxic Air Contaminant (TAC) emissions to residential receptors, sensitive receptors (e.g., children and elderly) and school receptors would be reduced below significant levels throughout San Pedro and Wilmington as a result of mitigation identified in the EIR in years 2009 to 2045. As discussed previously, the proposed Project includes analysis of Phase I construction and operational emissions from 2004 to 2008 that have already occurred and therefore cannot be mitigated. However, a Health Risk Analysis (HRA) was also completed for 2009 to 2078 that includes construction of Phases II and III and operation of all phases beginning in 2009. This HRA, which was disclosed in the EIS/EIR for informational purposes only and was not used to assess the significance of project impacts, indicates that residential cancer risk from Phases II and III of the proposed Project over the period 2009-2007 would be 7.5 in a million, which is less than the 10 in a million CEQA significance threshold, as a result of the proposed Project's mitigation measures. (see Figures 4 and 5)
- **Provides new jobs during the life of the project.** The proposed Project will create 4,687 direct permanent direct jobs by 2030. For our five-county region, Project operations would result in an additional 3,748 jobs. Annual pay for direct, indirect and induced jobs is estimated at about \$60,000 per job/per year. Annual tax revenues contributed by all workers would be \$85 million by 2045.
- **Provides new construction jobs.** Construction would result in an average of 180 annual full-time direct construction jobs and an additional 130 annual indirect construction jobs over the 6-year construction period. These workers would receive an annual pay for direct, indirect, and induced jobs estimated at approximately \$50,500 per job/per year. Annual tax revenues contributed by all workers for the peak construction activity year would reach approximately \$9 million.
- **Approval of a lease with terminal operator will provide Harbor Fund Revenues.** The China Shipping terminal operation will generate approximately revenues to the Port of Los Angeles over the life of the project. These funds are included in the Harbor Revenue fund for the purposes of operating, maintaining and improving the Port in accordance with the Tidelands Trust. Revenues from Container Terminal operation also provides for environmental improvements, including incentive programs associated with the CAAP for reduction of truck emissions and advancing clean technology, and form the basis for the ability to construct infrastructure necessary to implement waterfront commercial and recreational improvements in Wilmington and San Pedro.

- **The project would provide tax revenues.** Annual tax revenues contributed from construction for would reach \$9 million. Annual tax revenues contributed from operation would reach \$85 million.
- **Efficient Accommodation of Increased Throughput.** The Project would allow the terminal to implement efficiency measures such as new efficient cranes, deeper berths and longer wharves, and new truck gates that will allow the terminal to achieve its maximum capacity.
- **Electric Yard Equipment.** The proposed Project includes requirements for new electric technology including electric RTGs and an electric yard tractor demonstration project. Such programs will act as models for future Port terminal expansion projects.
- **Community Park and Beautification Plan.** The proposed Project includes, as a mitigation measure, construction of Plaza Park, a park identified and requested by the PCAC. The proposed Project also implements portions of the Northwest Harbor Beautification Plan.

In summary, the Project will allow the Port to meet its legal mandates to accommodate growing international commerce, while reducing Port air emissions, and provide jobs to the local economy. The Board hereby finds that the benefits of the proposed project described above outweigh the significant and unavoidable environmental effects of the project, which are therefore considered acceptable.

Figure 1: Emissions per TEU, mitigated Project

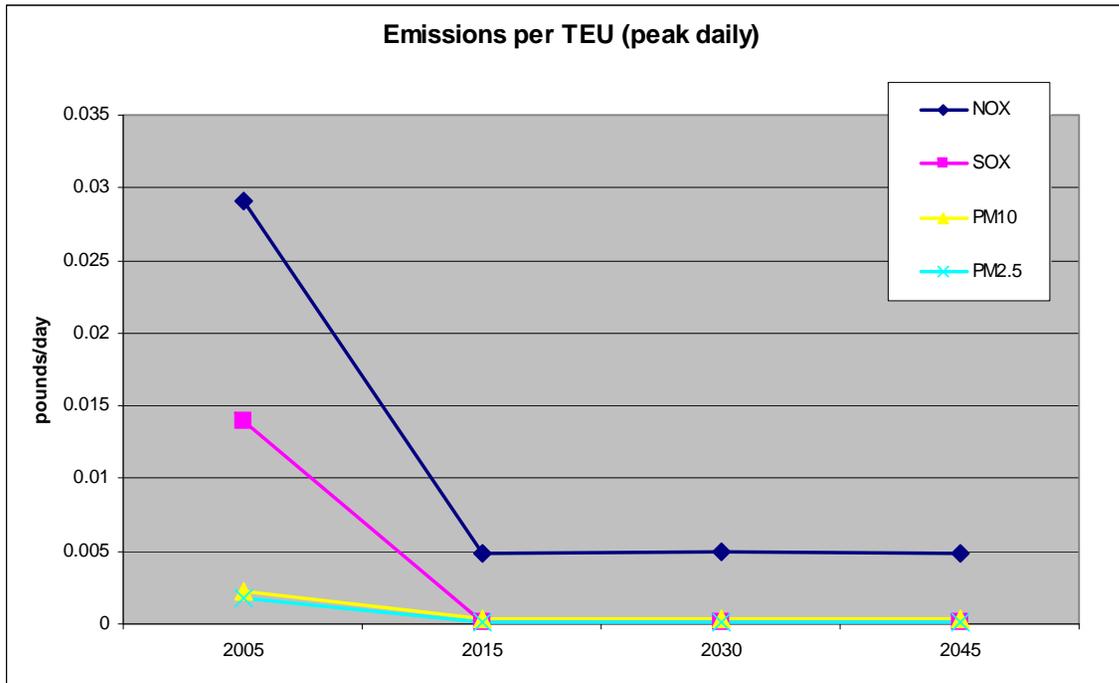


Figure 2: Peak daily Criteria Pollutant Emissions

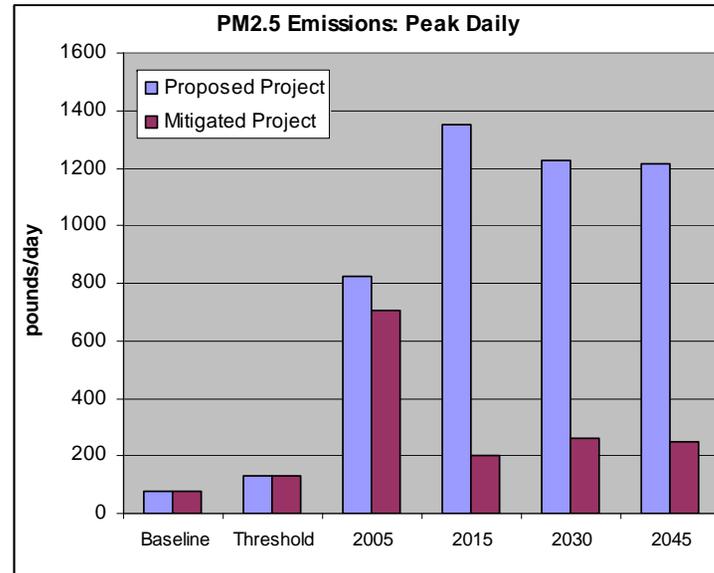
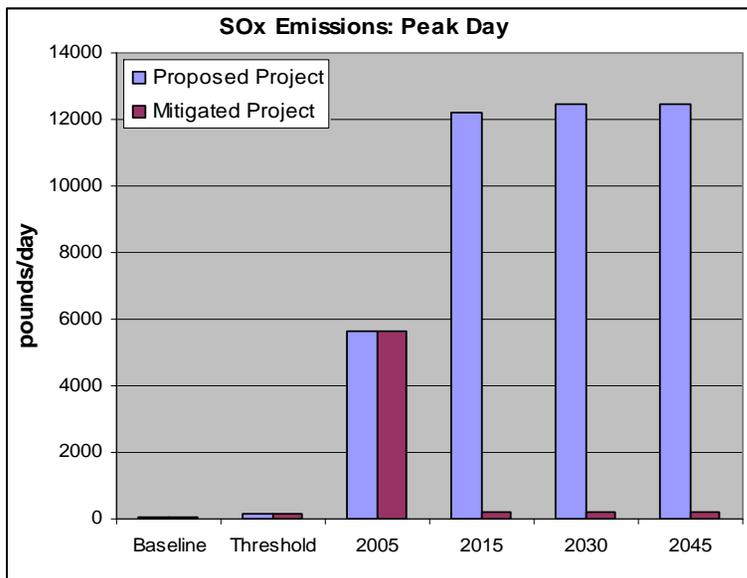
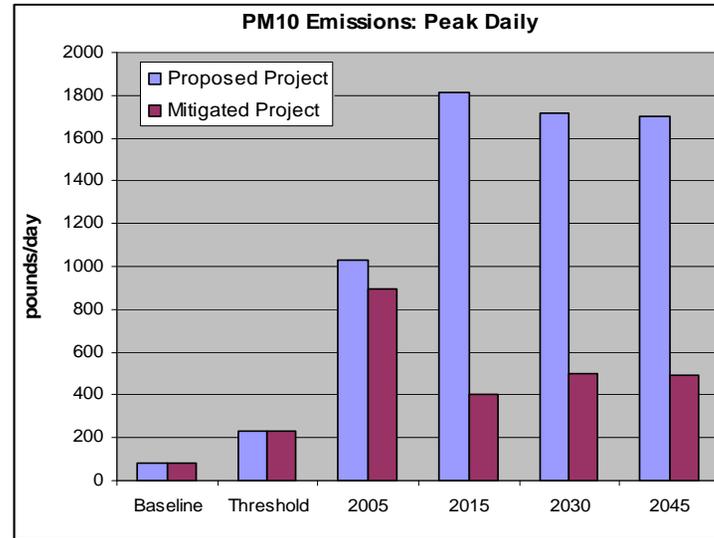
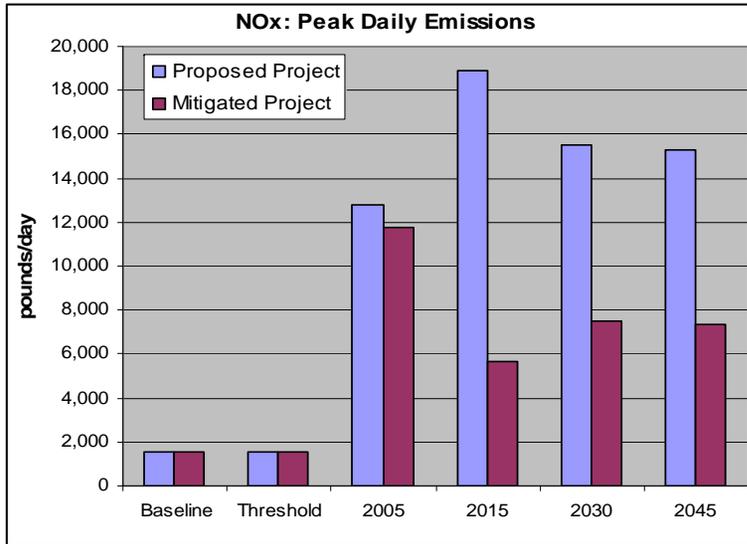
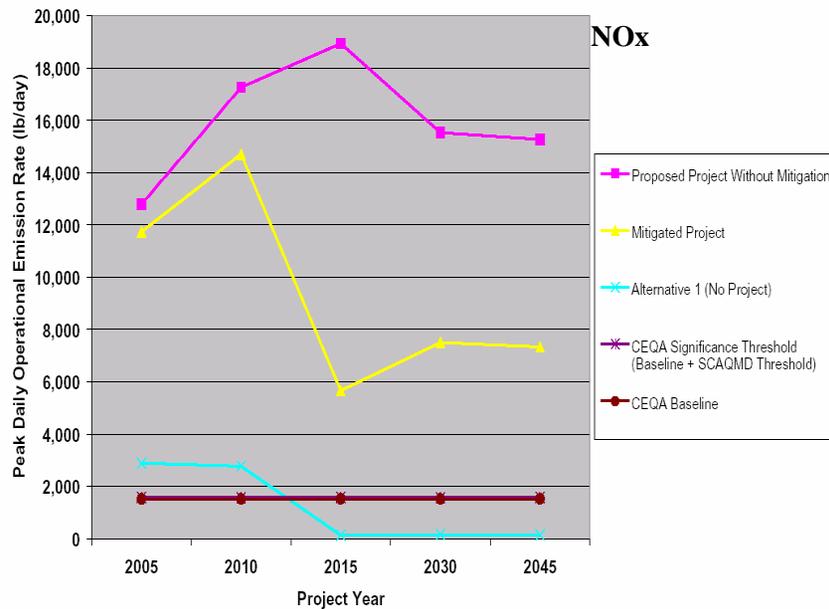
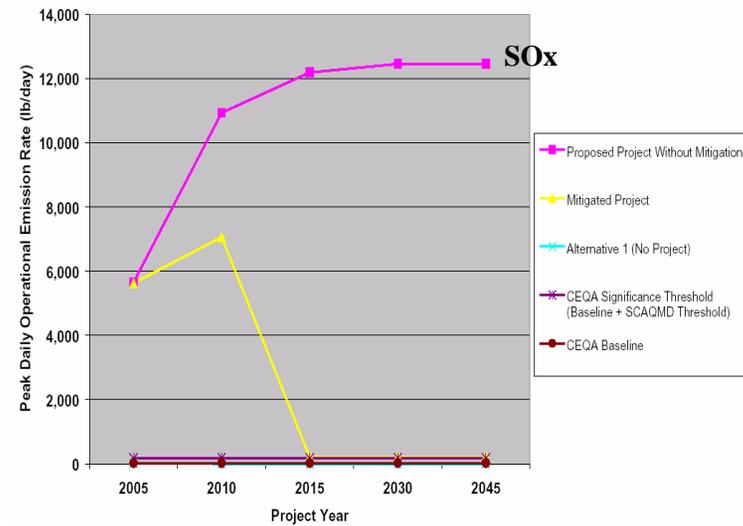
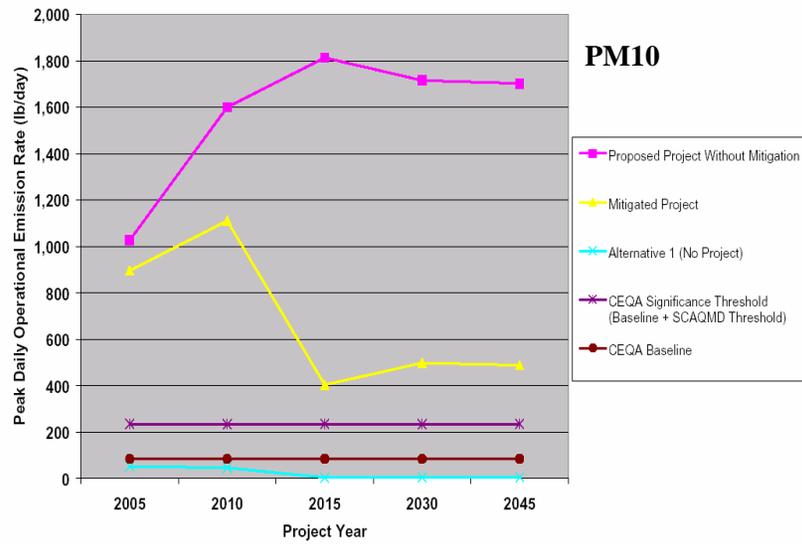


Figure 3: Comparison of the Proposed Project to the No Project



Figures 4 and 5: HRA Isopleths, Mitigated Project



Figure 4: 2004-2073

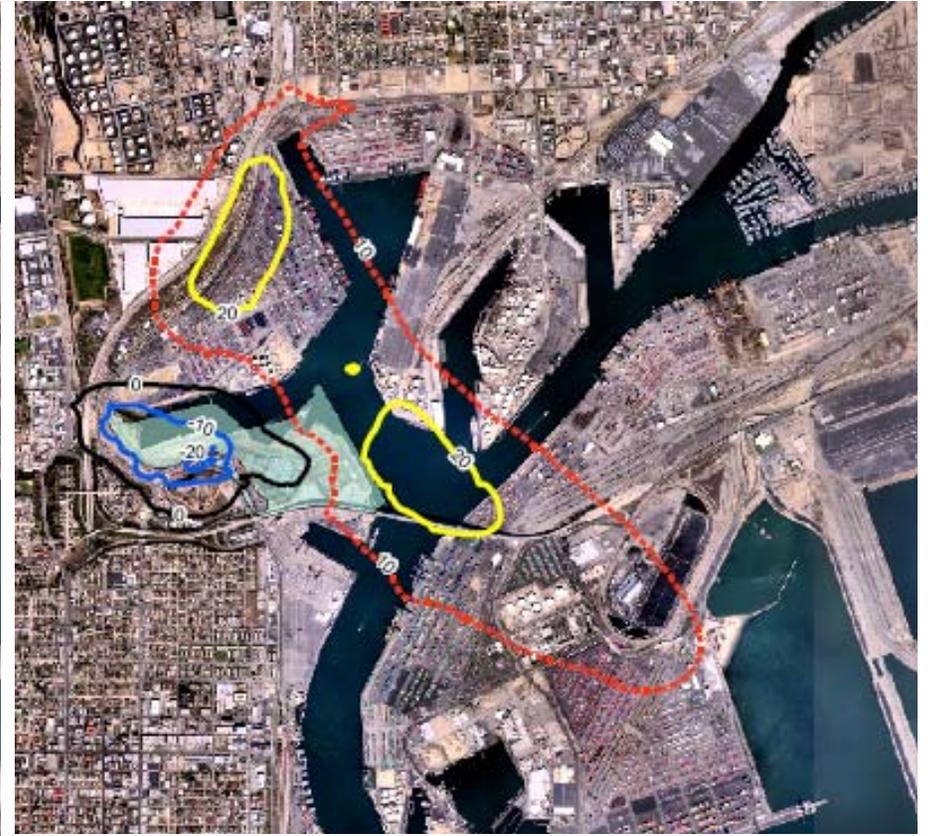


Figure 5: 2009-2078