APPENDIX B

PCAC and NNI Mitigation Measures

B

NNI MITIGATION MEASURES

The control measures described below were originally developed as part of work undertaken by the No Net Increase (NNI) Task Force. A major accomplishment of the NNI Task Force was identification of a broad suite of potential emission control strategies for the various source categories of equipment used in Port operations. As discussed in Chapter 1 (1.6.2), NNI was not adopted by the Harbor Department but does serve as a precursor for the CAAP. Although NNI was not adopted, the task force identified at least 68 control measures that could be considered at least potentially technically feasible for industrial Port projects. As shown in the NNI Mitigation Table, each control measure is assessed in relation to the specific project as defined in the Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report (SEIS/SEIR) through a standardized process. Using the control measure as a mitigation measures is considered feasible if all categories are marked "Yes" in the NNI Mitigation Table. This section expands on the NNI Mitigation Table, presenting a discussion on each measure and its feasibility for the Proposed Pacific Los Angeles Marine Terminal (PLAMT) Crude Oil Marine Terminal, Tank Farm Facilities, and Pipelines Project (proposed Project) at Berth 408.

B.1 Ocean Going Vessels

This section discusses the feasibility of applying or adapting the Control Measures for Ocean Going Vessels (OGVs) as part of the SEIS/SEIR for the proposed Project.

B.1.1 OGV1 – New Engine Standards for Ships

Description

The International Maritime Organization (IMO), the United Nations' specialized agency responsible for improving maritime safety and preventing pollution from ships, established limits for nitrogen oxide (NO_x) in Annex VI to the International Convention for the Prevention of Pollution from Ships in 1997. The limits apply to Category 3 diesel marine vessel engines (main engines) over 130 kilowatts (kW) installed on vessels constructed on or after January 2000. Although the NO_x limits

became effective in May 2005 (the treaty has recently been ratified by the required 15 countries representing at least 50 percent of the gross tonnage of the world's merchant shipping), engine manufacturers have generally complied with it since 2000 because the standards are retroactive to that date. The measure applies only to diesel engines over 130 kW installed on vessels constructed on or after January 2000.

Feasibility

This measure is generally considered feasible from an agency standpoint because it has already been adopted and is being implemented by engine manufacturers for merchant shippers. This measure has been included as project mitigation in the SEIS/SEIR for the proposed Project but is has not been included in the emissions calculations in the document because the tenant does not control a vessel fleet.

B.1.2 OGV2 – Vessel Speed Reduction Memorandum of Understanding

Description

This measure would fully implement vessel speed reductions (VSRs) to 12 knots at a distance of 20 miles from Point Fermin. An arriving or departing ship would travel at 12 knots for the 20-mile inbound or outbound transit and thus reduce the power requirements of the propulsion engine. The VSR is currently tracked through the Marine Exchange and operates under a Memorandum of Understanding (MOU) among the Port of Los Angeles, Port of Long Beach, U.S. Environmental Protection Agency (USEPA), California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), Pacific Merchant Shipping Association, and the Marine Exchange of Southern California.

Feasibility

Compliance with the VSR requirements to 20 nautical miles (nm) was proposed as a design element for the proposed Project and was considered in the project analysis before mitigation. Furthermore, 100% compliance with the VSR requirements to 40 nm was required as a mitigation measure.

B.1.3 OGV3 – Alternative Maritime Power

Description

This measure would utilize land-based facilities to supply electrical power to marine vessels during hoteling to reduce or eliminate the use of on-board auxiliary diesel engines and their associated emissions. This measure would implement alternative maritime power (AMP) requirements.

Feasibility

For the proposed Project, implementation of AMP is considered feasible and is included in the SEIS/SEIR as mitigation.

B.1.4 OGV4 – Auxiliary Engine Fuel Improvement Program

Description

This measure would require the use of lower sulfur fuels in OGV auxiliary engines, beginning at 40 nautical miles (nm) from Point Fermin. The program focuses on shifting bunker-burning auxiliary engines to 1.5 percent sulfur fuels and cleaner fuels (most commonly marine diesel oil [MDO]). Implementation of low sulfur fuels in auxiliary engines will occur as follows:

- 100 percent of ship auxiliary engines shall use fuel with a maximum sulfur content of 1.5 percent starting in 2005
- 50 percent of ship auxiliary engines shall use MDO or marine gas oil (MGO) with a maximum sulfur content of 0.2 percent starting in 2015
- 75 percent of ship auxiliary engines shall use MDO or MGO with a maximum sulfur content of 0.2 percent starting in 2030

Feasibility

This measure is considered feasible and has been included in the SEIS/SEIR for the proposed Project. This measure will be phased in to the operation via lease requirements to a maximum compliance rate of 75% of total vessel calls by 2015 and 95% of total vessel calls by 2017. (In practice, this is accomplished as an average of inbound and outbound vessel calls; for instance, in 2017, 90% of inbound and 100% of outbound vessels would comply.)

B.1.5 OGV5 – New Engine Standards for Category 3 Marine Engines

Description

This measure would consist of USEPA adoption of new cleaner emission standards (Tier 2 standards) for Category 3 engines (large main engines) by April 2007 for

U.S.-flagged vessels. Implementation of the new standards is assumed to begin in 2010.

Feasibility

It is currently unclear whether the measure would require a 30 percent NO_x reduction beyond IMO standards for U.S.-flagged ships, or if higher reduction standards will be pursued. This measure is considered feasible from a federal agency perspective (USEPA) because USEPA has authority to establish new marine engine standards, but it is not considered feasible by the Port of Los Angeles because the Port does not have authority to establish marine engine standards. If the new engine standards apply to U.S.-flagged vessels only, minimal reductions in NO_X and particulate matter less than 10 micrometers in aerodynamic diameter (PM_{10}) would occur as part of the proposed Project because the vessels expected to call at PLAMT are not controlled by the tenant and likely are not U.S. flagged. If the new engine standards apply to domestic and foreign vessels, then the NO_x and PM_{10} reductions could occur in the Port area as the new standards are implemented, possibly starting in 2010.

B.1.6 OGV6 – Reroute Cleaner Ships

Description

This measure would require the PLAMT tenant to reroute their clean ships (those ships meeting IMO MARPOL Annex VI emission limits) to the Port of Los Angeles.

Feasibility

This measure is not considered feasible and has not been required as a mitigation measure in the SEIS/SEIR for the proposed Project as the tenant does not control a vessel fleet. However, the project is expected to attract larger ships which are generally newer and cleaner.

B.1.7 OGV7 – Low-Emission Main Propulsion Engines

Description

This measure would require or provide incentives for the use of "Blue Sky Series" Category 3 engines in ocean-going vessels visiting the Port of Los Angeles. The emissions from Blue-Sky-Series-compliant engines are approximately 80 percent below IMO standards. This measure would likely require the installation of after treatment technologies on new or existing engines.

Feasibility

Engines that meet the Blue-Sky-Series emission levels may require the use of technologies that are best designed and incorporated into new vessels. This may require early adoption with significant lead time to allow for shipping lines to plan for purchase of cleaner new vessels. In addition, cleaner fuels may be required in conjunction with control technologies to achieve the target levels. Although selective catalytic reduction (SCR) technology has been demonstrated on four new OGVs carrying scrap/steel between the Bay Area and Korea, the applicability of low-emissions technologies like SCR to large ocean-going vessels such as tanker vessels needs to be further evaluated and demonstrated. Because it is currently unclear if tanker vessels can meet Blue Skies Series emission levels, this measure is not required as a mitigation measure in the SEIS/SEIR for the proposed Project. The proposed Project, however, does include a measure that calls for the tenant to work with shippers prior to new vessel purchases to integrate environmental measures and design.

B.1.8 OGV8 – Cleaner Fuels for Ship Auxiliary Engines

Description

Proposed regulations are currently being developed by the CARB to reduce NO_x and PM_{10} emissions from ship auxiliary engines by requiring the use of distillate marine fuels. Specifically, low sulfur marine gas oil would be required in ship auxiliary engines while operating in California Coastal Waters and at dockside (0.2 percent in 2006 and 0.1 percent in 2008). The CARB anticipates adopting the regulations in mid-year 2006.

Feasibility

This measure is considered feasible and has been promulgated by CARB. However, this regulation is currently subject to ongoing litigation. The current CARB rule includes a provision that would exclude ships that participate in AMP programs from this rule. Because the proposed Project includes strong AMP requirements and low sulfur MDO/MGO requirements, the Project will exceed proposed CARB requirements. In addition, this measure has been included as a mitigation measure for the proposed Project requiring the use of 0.2% sulfur fuel in main engines, auxiliary engines and boilers.

B.1.9 OGV9 – Main Engine Fuel Improvement Program

Description

This measure would provide incentives for ships that use 1.5 percent fuels in their main propulsion engines while within 40 nm of Point Fermin, specifically focusing on containerships. Target participation rates are 15 percent by 2006, 25 percent by 2007, 50 percent by 2008, and 100 percent by 2010.

Feasibility

This measure has been included as mitigation in the SEIS/SEIR for the proposed Project. Mitigation will require the use of 0.2% sulfur fuel in main engines, auxiliary engines and boilers for 95% of total vessel calls. (In practice, this is accomplished as an average of inbound and outbound vessel calls; for instance, in 2017, 90% of inbound and 100% of outbound vessels would comply.)

B.1.10 OGV10 – Creation of a Sulfur Emission Control Area

Description

USEPA is currently studying the proposal to create a sulfur emission control area (SECA) covering all of North America. Under this measure, it is envisioned that a SECA will be established to limit the sulfur content of marine fuels used throughout North America to 1.5 percent.

Feasibility

This measure is considered feasible from a federal agency perspective (USEPA) because USEPA has authority to establish a SECA, but it is not considered feasible by the Port of Los Angeles because the Port does not have authority to establish a SECA. This measure would be similar to OGV9 in that it would effectively result in the use of low-sulfur residual fuels for main propulsion engines in U.S. Territorial waters. The technical and logistical issues described under OGV9 would apply to this measure. Because the Port does not have the authority to establish a SECA, this measure is not included in the SEIS/SEIR as mitigation. It should be noted, however, that this measure would be implemented if USEPA establishes a SECA.

If USEPA determines that a SECA in North America is not feasible and will not be established, then the measures under OGV9 would be implemented, which require the use of low-sulfur fuel for main engine propulsion within 40 nm of Point Fermin. Mitigation has been added to the SEIS/SEIR for the proposed Project that effectively

goes beyond OGV10 in the Port area by requiring 0.2% sulfur fuel in main engines, auxiliary engines and boilers.

B.1.11 OGV11 – Expanded Auxiliary Engine Fuel Improvement Program

Description

This measure would build on OGV4 by providing incentives to fully implement the use of distillate fuels for auxiliary marine engines. This measure focuses on shifting auxiliary engines to fuels of 0.2 percent sulfur content or lower in 2006 and 0.1 percent sulfur content or lower in 2008. Target participation rates are 25 percent in 2006, 75 percent in 2007, and 100 percent in 2008.

Feasibility

Mitigation has been added to the SEIS/SEIR for the proposed Project that requires 0.2% sulfur fuel in main engines, auxiliary engines and boilers. In regards to the request to mandate fuel with a fuel content of 0.1% instead of 0.2%, the Port has found that requiring 0.1% is infeasible due to availability issues. In order to allow for some margin of error and product contamination in the distribution system, when a shipping line orders 0.2% sulfur fuel, they are actually receiving a fuel with lower sulfur content of between 0.13% and 0.16%. Therefore, if the mitigation measure required 0.1% fuel, the fuel supplier would have to provide fuel at a lower than 0.1% content, which may not be currently possible at refineries. Additionally, 0.2% 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% sulfur fuel was found to be feasible from a port-wide perspective.

B.1.12 OGV12 – Expanded Main Engine Fuel Improvement Program

Description

This measure would provide incentives for ships using low-sulfur fuel (0.2 percent) in their main engines within 40 nm of Point Fermin. Target participation rates are 50 percent by 2008 and 90 percent by 2010. Sulfur oxide (SO_x) and PM emissions would be reduced as a result of this measure.

Feasibility

This measure has been added to the proposed Project as a mitigation measure. Mitigation has been added to the SEIS/SEIR for the proposed Project that requires 0.2% sulfur fuel in main engines, auxiliary engines and boilers for 95% of vessel calls. (In practice, this is accomplished as an average of inbound and outbound vessel calls; 90% of inbound and 100% of outbound vessels would comply.)

B.1.13 OGV13 – Additional Auxiliary Engine Reductions for Frequent Callers

Description

Proposed regulations are currently being developed by the CARB to reduce NO_x and PM_{10} emissions from auxiliary engines on ships that frequently call at California ports. This measure would require "frequent callers" (ships that annually call five or more times at California ports) to reduce their auxiliary engine emissions beyond the cleaner fuel requirements of OGV8. Ships that call at California ports five or more times in a calendar year would be required to submit and implement a plan to reduce the PM and NO_x emissions from their auxiliary engines by an additional 50 percent beyond the requirements of OGV8.

Feasibility

Potential implementation issues may include technical issues with implementation of retrofit control technology, enforcement of numerous unique control plans, and legal challenges of state authority over vessels. AMP may be one means of compliance. Although this measure falls under the purview of the CARB, the required plans to reduce PM_{10} and NO_x emissions would be prepared by the terminal operator and submitted to the Port for review. Because of this, this measure has been effectively covered under the mitigation measures in the SEIS/SEIR for the proposed Project.

B.1.14 OGV14 – Retrofit/Repower Requirements for Infrequent Callers

Description

This measure will require the on-board auxiliary engines of vessels that call infrequently (two to four times annually) to the Port to be retrofitted or repowered to achieve at least a 50 percent reduction target from their baseline emissions. Retrofit options for on-board auxiliary engines may consist of retrofit and emission treatment technologies used for Category 1 and 2 marine engines such as SCR, diesel particulate filters (DPF), diesel oxidation catalysts (DOC), exhaust gas recirculation (EGR), water injection, and emulsified fuels. Targeted participation rates are 50 percent beginning in 2010 and 100 percent in 2015.

Feasibility

Limited technologies are currently available or demonstrated for OGV auxiliary engines. AMP is considered a method to meet the intent of this measure; therefore, this measure is considered feasible and has been included as mitigation in the SEIS/SEIR for the proposed Project.

B.1.15 OGV15 – Expanded VSR Program

Description

This measure would convert the voluntary VSR program to a mandatory requirement and extend the VSR distance from 20 to 40 nm out from Point Fermin.

Feasibility

This measure has been included as mitigation in the SEIS/SEIR for the proposed Project.

B.1.16 OGV16 – Expanded AMP

Description

This measure would build on OGV3 and require a higher percentage of ships calling at the PLAMT Terminal to use AMP and shut off auxiliary on-board engines. This measure would use incentives to achieve a 90 percent AMP compliance level.

Feasibility

This measure is not considered feasible. The proposed Project has a mitigation measure requiring 70% compliance with AMP, but incentives are not involved.

B.1.17 OGV17 – Additional In-use Measures for Ships (beyond OGV8, OGV10, and OGV13)

Description

In the "State and Federal Element" of the *South Coast State Implementation Plan for Ozone,* there is a "Long Term Advanced Technology Measure" that calls on USEPA (in cooperation with the CARB and the local air pollution control districts) to achieve a statewide 25 to 40 percent reduction in NO_x and PM from ocean-going ships by 2010 (NO_x is an ozone precursor). Measures OGV8, OGV10, and OGV13 described above may not completely fulfill the State Implementation Plan (SIP)-required

emission reductions. This measure, therefore, has been proposed to achieve emissions reductions from vessels beyond the reductions gained from OGV8, OGV10, and OGV 13 to meet the required SIP reductions. Additional measures that may be utilized include a variety of in-use emission reduction strategies as outlined in the SIP, such as the use of operational controls (e.g., vessel-speed-reduction strategies or idling limits), cleaner fuels, economic incentive programs, cold ironing, and opacity (smoke) limits.

Feasibility

This measure is considered feasible from a federal agency perspective (USEPA) because USEPA (in consultation with CARB and the SCAQMD) has authority to establish additional emission-reduction requirements for ocean-going vessels, but it is not considered feasible by the Port of Los Angeles because the Port does not have such authority. Because of this, this measure is not included in the SEIS/SEIR as mitigation. It should be noted, however, that if and when USEPA does develop the additional requirements, implementation of the requirements in the Port and as applicable to vessel fleets would result in additional emission reductions. Main engine control devices, such as SCR, Exhaust Gas Water Treatment, Water Injection, and Injection Timing Delay would potentially reduce NO_2, PM_{10} and $PM_{2.5}$, however, as discussed below, because most of the measures are still in the research and development phases, emission reductions are theoretical. New main engine control devices may decrease emissions in 2010; however the main engine technology identified in comments are not feasible at this time. For example, although SCR technology has been demonstrated on four new vessels carrying scrap/steel between the Bay Area and Korea, the applicability of low-emissions technologies like SCR to large ocean-going vessels needs to be further evaluated and demonstrated. There are still a number of feasibility questions in regards to SCR, namely spatial needs, reactant (ammonia) availability and byproduct issues. At this time, SCR is not feasible. SCR and the other control devices listed above however are expected to be available in the future and therefore are currently being tested as part of the TAP. The lease measures below is designed to provide a process to consider and implement new technology identified in the TAP throughout the lease period.

> *As partial consideration for the Port's agreement to issue the permit to the tenant, 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 the parties mutual agreement on operational feasibility and cost sharing which shall not be unreasonably withheld.*

Additionally, MM AQ-18 (New Vessel Builds) has been modified to include additional future technologies.

B.2 NNI Harbor Craft Measures

This section discusses the feasibility of applying or adapting the Control Measures for Harbor Craft (HC) as part of the SEIS/SEIR.

B.2.1 HC1 – New Engine Standards for Harbor Craft

Description

USEPA approved final exhaust emission standards for new diesel engines over 37 kW (50 horsepower [hp]) on December 29, 1999 (64 FR 73301). The standards apply primarily to commercial harbor craft with Category 1 and 2 engines, and implementation of the new standards began in 2005. This measure would reduce the level of NO_x, reactive organic gas (ROG), PM, and carbon monoxide (CO) emitted from harbor craft engines.

Feasibility

This measure is considered feasible from a federal agency perspective (USEPA) because USEPA has authority to establish emission standards for marine engines. It is not considered feasible by the Port of Los Angeles because the Port does not have authority to establish engine standards for harbor craft. Although this measure has not been included as Project mitigation in the SEIS/SEIR for the proposed Project, emission reductions will occur on a Portwide basis as the new engine standards are implemented by various harbor craft users in the Port area. To the extent that harbor craft that meet the new engine standards provide vessel-assist services to vessels calling at Berth 408, additional reductions in Project emissions would occur.

B.2.2 HC2 – Clean Fuels for Harbor Craft

Description

Under this control measure, the CARB would require that diesel fuel sold, supplied, or offered for sale to harbor craft operators in California meet the specifications for vehicular diesel fuel, commonly referred to as CARB diesel fuel. Commercial Harbor Craft include a wide variety of vessels such as tug/tow boats, commercial fishing vessels, charter fishing vessels, pilot boats, work boats, crew/supply boats, ferry/excursion vessels, and government vessels. This measure would reduce the level of NO_x, SO_x, and PM emitted from harbor craft engines. This measure becomes effective in the South Coast Air Basin in 2006 and statewide in 2007. CARB diesel fuel currently has a sulfur limit of 500 parts per million (ppm); the sulfur limit will be reduced to 15 ppm (i.e., ultra-low-sulfur diesel [ULSD]) by September 1, 2006, following the California Diesel Fuel Regulations.

Feasibility

This measure is considered feasible from a state agency perspective (CARB) because the CARB has authority to establish fuel requirements in California territorial waters. It is not considered feasible by the Port of Los Angeles because the Port does not have such authority. Although this measure has not been specifically included as

Project mitigation in the SEIS/SEIR for proposed Project, emission reductions from implementation of this measure have been included in the document baseline emission calculations.

B.2.3 HC3 – Early Implementation of Ultra-Low-Sulfur Diesel

Description

This measure would provide subsidies for the early implementation of ULSD fuels in harbor craft that operate in and service the Port of Los Angeles. This measure would reduce the level of NO_x, PM, and SO_x emissions from harbor craft 1 year early. This measure started in 2005 and will end in 2006 when the new fuel standards (see HC2 above) take effect.

Feasibility

This measure is considered feasible because ULSD fuel is available and the Port of Los Angeles has the authority to implement it. This measure would not apply to the proposed Project because it will become operational after 2006.

B.2.4 HC4 – Dredging Activities

Description

The CARB and SCAQMD have adopted regulations that require dredges that participate in the Statewide Portable Equipment Registration Program (PERP) to have all portable engines certified to Tier 1 or 2 USEPA/CARB nonroad engine standards, or equivalent, by January 2005. Dredges are also subject to the Airborne Toxic Control Measure (ATCM) for Diesel-Fueled Portable Engines, requiring dredges to be certified to Tier 1, 2, or 3 USEPA/CARB nonroad engine standards by 2010. After 2010, the ATCM requires fleets of portable engines to meet diesel PM emission averages that become increasingly more stringent in 2013, 2017, and 2020. By 2020, portable engines on dredges must be certified to Tier 4 emission standards for USEPA/CARB newly manufactured nonroad engines or be equipped with a Level 3 PM control technology or a combination of verified control technologies to achieve 85 percent reduction.

Feasibility

This measure is considered feasible from a state agency perspective because the CARB and the SCAQMD have authority to regulate dredging activities and engines. It is not considered feasible by the Port of Los Angeles because the Port does not have such authority. This measure has not been included as Project mitigation in the SEIS/SEIR for the proposed Project.

B.2.5 HC5 – Technical Advisory Committee Harbor Craft Measures

Description

This ongoing measure is implementing various emission reduction strategies evaluated by the technical advisory committee (TAC). The harbor craft reductions focus on repowering or retrofitting primarily harbor craft main or auxiliary engines to reduce NO_x and PM emissions.

Feasibility

This measure is considered feasible because the Port has the authority to provide incentives for the retrofitting or repowering of harbor craft engines. This measure is not specifically included as Project mitigation in the SEIS/SEIR for the proposed Project because this is an ongoing Portwide program and because harbor craft (tugs) are not dedicated to particular shippers; rather, they provide service to multiple shippers.

B.2.6 HC6 – New Engine Standards for Category 1 and 2 Marine Engines

Description

USEPA is considering standards for new marine diesel engines with per-cylinder displacement below 30 liters modeled after the 2007/2010 clean highway and nonroad diesel engine program. The regulation would emphasize achieving large reductions in PM and NO_x emissions as early as possible through the use of advanced emission control technology. The standards would apply to marine diesel engines used in all harbor craft applications: commercial (excluding ocean vessels), recreational, and auxiliary. The standards are planned for adoption and could apply as early as 2011.

Feasibility

This measure is considered feasible from a federal agency perspective because USEPA has authority to regulate emission standards for marine engines. This measure is not considered feasible by the Port of Los Angeles, however, because the Port does not have such authority. Although this measure has not been included as Project mitigation in the SEIS/SEIR for the proposed Project, this measure will result in reduced emission levels from harbor craft in the Port as it is implemented over time, in particular, as more efficient tugs provide vessel-assist services to the project fleet.

B.2.7 HC7 – Emulsified Fuels

Description

This measure would require the use of emulsified fuel in Category 1 and 2 marine engines in harbor craft that are in the Port area. This control strategy could be implemented in 2006 starting with 80 percent of the harbor craft using emulsified fuels, except for assist tugs and line-haul tugs. This 80 percent participation rate could then apply to line-haul tugs beginning in 2008, with the condition that an on-board emulsifier would be used to provide the fuel.

Feasibility

Emulsified diesel is no longer considered available.

B.2.8 HC8 – In-Use Harbor Craft Emission Reduction Measure/Airborne Toxic Control Measure

Description

The CARB is proposing to reduce NO_x, ROG, and PM emissions from existing "in-use" harbor craft engines. This proposed measure includes a number of options to reduce emissions, including the use of add-on control equipment and repowering, replacing or retrofitting existing vessels and/or early introduction of new vessels. Due to the diversity within the harbor craft category, specific emission reduction proposals may vary with the type of vessels, industry, or other factors.

Feasibility

This measure is considered feasible from a state agency standpoint; however, several technical issues associated with this measure need to be addressed. There is a lack of CARB-verified control technologies, and some control technologies may prove problematic. Harbor craft may have space limitations for in-use vessel control technologies such as SCR and DPF, as well as safety concerns due to high temperature required for DPF regeneration. In addition, engine replacement and retrofit technologies are likely to have high implementation costs. For these reasons, and because the Port does not have authority over harbor craft engine emission standards, this measure is not included as mitigation in the SEIS/SEIR for the proposed Project. It should be noted, however, that the Port is undertaking a harbor craft repowering and retrofitting incentive program (see HC5 above) to reduce NO_x and PM emissions in the Port area.

B.2.9 HC9 – Repower Existing Harbor Craft

Description

Under this measure, the Port would repower 250 harbor craft vessels with new engines that meet USEPA 2004 Category 1 and 2 marine engine standards to reduce NO_x and PM emissions. An additional 150 harbor craft have already been repowered under existing Port incentive programs. This measure would go beyond existing repowering incentives and would require the Port to directly facilitate repowering of the remaining harbor craft.

Feasibility

This measure is considered technically feasible, and the Port already has an ongoing program to repower existing harbor craft. Harbor craft such as tugs provide services to multiple shipping lines. Because harbor craft services are Portwide, this measure is not included as mitigation in the SEIS/SEIR for the proposed Project. As more harbor craft are being repowered through the existing program, however, some emission reductions associated with proposed Project operations would occur.

B.2.10 HC10 – Retrofit Existing Harbor Craft

Description

This measure would require existing harbor craft diesel engines (main and auxiliary) to be retrofitted with DPFs, DOC, and/or SCR devices to reduce NO_x and PM emissions.

Feasibility

This measure is considered technically feasible over time; however, demonstration projects will likely be required to address space limitation issues with in-use vessel control technologies such as SCR and DPF, as well as safety concerns due to high temperature associated with DPF regeneration. In addition, such retrofit systems for harbor craft engines do not currently exist as commercially available units; therefore, a time constraint may exist for implementation. The CARB is currently developing a statewide regulation for In-Use Harbor Craft (HC8) that is similar to that identified in this control measure. Because harbor craft services are Portwide rather than fleet specific, this measure is not included as Project-specific mitigation in the SEIS/SEIR for the proposed Project.

B.2.11 HC11 – AMP-Ready Staging Areas for Vessel-Assist Tugs

Description

This measure would establish staging areas for vessel-assist tugs to reduce emissions associated with unnecessary trips back to home berths after tugs complete each ocean-going vessel assist. In addition, the staging areas would be AMP-ready so that tug-boat systems could be powered from land-based electrical facilities rather than auxiliary engines.

Feasibility

This measure appears technically feasible; however, constraints related to locating the staging areas and new AMP facilities may exist. Retrofitting tugs for AMP (to offset the need for operating auxiliary engines on tugs) also may not result in the same emissions-reduction benefits as implementing AMP for OGVs. This is due to the much smaller displacement of harbor craft auxiliary engines compared to OGV auxiliary engines. Because the feasibility of this measure is uncertain and because tugs provide Portwide vessel-assist services to multiple fleets, this measure is not included as Project mitigation in the SEIS/SEIR for the proposed Project.

B.3 Cargo Handling Equipment

This section discusses the feasibility of applying or adapting the Control Measures for Cargo Handling Equipment (CHE) as part of the SEIS/SEIR for the proposed Project. The proposed Project does not include any Cargo Handling Equipment.

B.3.1 CHE1 – Emission Standards for Heavy-Duty Nonroad Diesel Engines

Description

Federal and state emissions standards for nonroad diesel engines have been adopted and establish tiers of increasingly stricter emissions standards that have been and will continue to be implemented to reduce hydrocarbons (HC), NO_x, PM, CO, and SO_x emissions. In August 1998, USEPA adopted new emission standards for NO_x, HC, and PM emission standards for nonroad compression ignition engines that would reduce NO_x and PM emissions by 60 percent. In January 2000, the CARB adopted standards to existing California emission standards to harmonize as closely as possible with the federal program. These standards consist of a tiered structure of emission limits based on engine power. The Tier 1 standards were implemented in 1996. In 2001, the process of phasing in the Tier 2 standards began. The phasing in of the Tier 3 standards will begin in 2006. The Tier 4 standards are based on the use

of advanced after-treatment technologies. These technologies will reduce PM and NO_x emissions from new engines up to 95 percent when compared to previous emission requirements.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.2 CHE2 – Yard Tractor Modernization and ULSD Programs

Description

This measure would accelerate the replacement of existing yard tractors with the cleaner engines and accelerate use of ULSD fuels through a voluntary, incentive-based program to reduce NO_x and PM, and SO_x emissions. The NO_x emission standard is 2.0 grams (g) per brake horsepower per hour (bhp-hr). The PM emission standard is 0.015 g/bhp-hr. There are no engine emission standards for SO_x; rather, SO_x emissions are reduced by using lower sulfur. Implementation could include (1) replacement of existing yard tractors with tractors equipped with on-road engines, (2) replacement of existing yard tractors with tractors equipped with low-emission nonroad engines, and (3) replacement of existing yard tractors with a combination of on-road and nonroad tractors. This fuel neutral performance-based measure would be completed in years 2007 and 2008.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.3 CHE3 – Early Implementation of ULSD for CHE (Other than Yard Tractors)

Description

This program would subsidize the incremental cost of using ULSD fuels in CHE (other than yard tractors) instead of current diesel fuels to reduce PM and SO_x emissions. This measure would convert the entire nonyard tractor CHE fleet to ULSD in 2006. This measure would provide short-term emission reductions because the California Diesel Fuel regulations will require ULSD in off-road equipment by September 1, 2006.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.4 CHE4 – Alternative Fuel Yard Tractor Resolution

Description

In February 2003, the Board of Harbor Commissioners adopted Resolution 6164 to reduce NO_x and PM emissions from diesel yard tractors. The Resolution requires terminal operators to use alternative-fuel yard tractors, unless it is operationally infeasible, for new leases. For substantial renegotiations of existing leases, and for all future purchases or leases of yard tractors, the Resolution requires terminal operators to use alternative-fuel yard tractors, unless it is operationally infeasible. Resolution 6164 also requires terminal operators to retrofit all their existing diesel yard tractors and retrofit or purchase other CHE with either a CARB-verified DPF using ULSD or a CARB-verified DOC using emulsified fuel. Where alternative-fuel yard tractors are determined to be operationally infeasible, the Resolution requires the use of hybrid electric equipment, equipment operated with a DPF and ULSD, or equipment operated with a DOC and emulsified fuel.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.5 CHE5 – Emulsified Fuels

Description

Under this existing Clean Air Program measure, the Port provides subsidies to CHE fleet operators for the use of emulsified fuels. This measure would continue the existing measure to reduce NO_x and PM emissions from CHE.

Feasibility

Emulsified diesel is no longer considered available.

B.3.6 CHE6 – Technical Advisory Committee CHE Measures

Description

As part of the China Shipping settlement, the Port has committed to implementing various emission-reduction strategies as determined and evaluated by the TAC. Under the TAC CHE measures, NO_x and PM emissions would be reduced by converting yard tractors to liquefied natural gas (LNG), using oxygen (O_2) Diesel Fuel (proprietary ethanol-diesel blend) in selected nonroad equipment, in some cases, with an oxidation catalyst retrofit and repowering of selected CHE.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.7 CHE7 – Expanded Yard Tractor Modernization

Description

Under this measure, the Port will expand the yard tractor modernization program (CHE2) by providing incentives to CHE fleet owners to further modernize their yard tractor fleets to meet NO_x and PM standards that are based on the 2007 on-road engine standards. Implementation of this measure would occur in six phases starting in 2007:

- Phase 1 (2007): replace remaining 50 percent of Tier 1 (1996-2002 models) yard tractors (the first 50 percent were procured in 2006 in accordance with CHE2)
- Phase 2 (2008): replace all Tier 2 (2003-2004 models) yard tractors
- Phase 3 (2011): replace all yard tractors originally procured in 2005 (CHE2, Phase 1)
- Phase 4 (2012): replace all yard tractors originally procured in 2006 (CHE2, Phase 2)
- Phase 5 (2013): replace all yard tractors procured in 2007, under Phase 1

- Phase 6 (2014): replace all yard tractors procured in 2008, under Phase 2

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.8 CHE8 – Enhanced CHE Modernization

Description

Under this measure, the Port would require that both new purchases and replacement or retrofit of existing CHE equipment (other than yard tractors, such as top picks, side picks, and rubber-tired gantry cranes) use alternative fuel, on-road engines, or Tier 3 and 4 nonroad engines. Implementation of this measure began in 2005 and will continue through 2014.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.3.9 CHE9 – Cargo Handling Equipment at Ports and Intermodal Rail Yards

Description

The CARB is in the process of completing a regulation that requires a reduction in emissions from diesel-fueled, nonroad mobile equipment used for cargo handling at California ports and intermodal rail yards. Implementation of this regulation under this measure would result in emission reductions, most likely through the use of Best Available Control Technology (BACT). Implementation of the regulation will begin in 2007.

Feasibility

This measure is not applicable to the proposed Project because the project does not include cargo handling equipment.

B.4 NNI Rail Measures

This section discusses the feasibility of applying or adopting the Control Measures for Rail (R) as part of the SEIS/SEIR. The proposed Project does not include any rail trips.

B.4.1 R1 – Tier 0, 1, and 2 Engine Standards for New and Remanufactured Locomotives

Description

In 1998, USEPA adopted locomotive emission standards for NO_x, HC, CO, PM and smoke, which are applicable to newly manufactured and remanufactured railroad locomotives and locomotive engines. The rule took effect in the year 2000 and applies to locomotives originally manufactured during or after 1973, any time they are manufactured or remanufactured.

The first set of standards (Tier 0) applies to locomotives and locomotive engines originally manufactured from 1973 through 2001, or any time they are remanufactured. The second set of standards (Tier 1) applies to locomotives and locomotive engines originally manufactured from 2002 through 2004 or their subsequent remanufacture. The final set of standards (Tier 2) applies to locomotives and locomotive engines originally manufactured in 2005 and later. Tier 2 locomotives and locomotive engines will be required to meet the applicable standards at the time of original manufacture and each subsequent remanufacture.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.2 R2 – CARB Diesel Fuel Used by Intrastate Locomotives

Description

The control measure will reduce NO_x, PM, and SO_x emissions by requiring that diesel fuel sold, supplied, or offered for sale to intrastate locomotive operators in California meet the specifications for vehicular diesel fuel, commonly referred to as CARB diesel fuel. The regulation becomes effective statewide in January 2007.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.3 R3 – Federal Standards for Nonroad Diesel Fuel

Description

Current federal nonroad diesel fuel standards require that sulfur levels for nonroad diesel fuel be reduced from current uncontrolled levels ultimately to 15 ppm, with an interim cap of 500 ppm. The rule applies to all locomotives and marine vessels. This measure requires refiners to produce nonroad, locomotive, and marine diesel fuel that meets a maximum sulfur level of 500 ppm beginning in 2007 and a maximum sulfur level of 15 ppm in 2012.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.4 R4 – Memorandum of Understanding in the South Coast Air Basin

Description

This measure would continue the voluntary implementation of the 1998 MOU (to reduce NO_x emissions in the South Coast Air Basin [SCAB]) established between the CARB and the two Class 1 freight railroads operating in California (Burlington Northern and Santa Fe [BNSF] and Union Pacific Railroad [UPRR]). The MOU establishes a locomotive fleet average emissions program with an emission reduction target for 2010. The intent is to accelerate introduction of newer, lower emitting locomotives in the SCAB. The locomotive fleet average emissions program is tied to the promulgation of the USEPA National Locomotive Rule and requires that fleet average emissions are equivalent to the USEPA 2005 locomotive NO_x standard (5.5 g/bhp-hr) by 2010.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.5 R5 – PHL Switcher Locomotive Modernization and ULSD Programs

Description

This measure would require Pacific Harbor Line (PHL) to replace 16 switch engines with newer and substantially cleaner Tier 2 railroad locomotives engines (equipped with idling controls) by 2006 to reduce NO_x and PM emissions. This measure would also provide subsidies for the use of ULSD in the switch engines until state law mandates it in 2007.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.6 R6 – Ultra-Low Emission Switcher Locomotives: PHL

Description

This measure will require the remaining four on-Port PHL switcher locomotives (beyond the 16 locomotives covered by R5) to be replaced with ultra-low emission locomotives during the period from 2007 to 2010.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.7 R7 – Ultra-Low Emission Switcher and Line Haul Locomotives: Class 1

Description

This control strategy requires deployment of ultra-low emission locomotives by Class 1 freight railroads for out-of-Port switching and in-Port and out-of-Port line haul operations. The first phase would apply to Port-related switcher locomotives, and the second phase would apply to Port-related line haul locomotives. This measure may be met through the use of Tier 3 nonroad engines (see R6) and/or the use of control technologies such as DPFs, LNG conversions, and SCR.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.8 R8 – Tier 3 Engine Standards for New and Remanufactured Locomotives and Locomotive Engines

Description

USEPA is considering standards for new locomotive diesel engines and additional requirements for all 1973 and later locomotives covered under current Tier 0, 1, and 2 engine standards. USEPA has identified a number of different advanced emission control and after treatment technologies, currently being developed to meet 2007 highway engine standards and Tier 4 nonroad engine standards. Technologies for control of PM include catalyzed diesel particulate filters (CDPF), and for NO_x technologies include NO_x adsorbers and SCR. To operate reliably and at high efficiencies, these technologies will require use of 15-ppm diesel fuel. Use of EGR and optimized fuel injection could also be applied.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.9 R9 – CARB Diesel Fuel for Class 1 Railroad Locomotives

Description

Under this measure, the Port would provide incentives to Class 1 railroad operators that provide line-haul service within the Port of Los Angeles to only use fuel for their operations that meets the same fuel-based standards as intrastate locomotives (i.e., CARB Diesel) while in the SCAB. The CARB recently adopted low-sulfur fuel requirements for intrastate locomotives and harbor craft do not apply to locomotives operated by Class 1 freight railroads (i.e., BNSF, UPRR) operated in the SCAB. This control strategy is proposed for implementation for all locomotives in 2007.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.10 R10 – Idling Controls for Switcher and Line Haul Locomotives

Description

Under this measure, the Port would require the installation of tamper-proof idling control devices on all switcher and line haul locomotives serving the Port of Los Angeles. These idling control systems turn off the propulsion engines after a certain time or when use parameters are exceeded, and then restart the engine whenever engine or operational parameters drop below their minimums. Locomotives spend from 40 to 80 percent of their operational time idling, but almost never turn off their propulsion engines for operational and technical reasons that include the need to avoid startup delays, to maintain water jacket temperature, to maintain battery voltage and brake system air pressure, and to reduce wear on the starting system and battery pack.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.11 R11 – Efficiency Improvements on In-Use Class 1 Rail Equipment

Description

This measure would continue the commitment of Class 1 freight railroads to develop and implement efficiency improvements to increase fuel efficiency and reduce NO_x and PM emissions. The efficiency improvements in locomotives and railcars include measures such as low-torque bearings.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.4.12 R12 – Electrification of the Alameda Corridor and Alameda Corridor East

Description

Under this measure, the electrification of the Alameda Corridor and Alameda Corridor East would be considered to achieve reductions from line-haul locomotives by converting diesel locomotives to electrical power.

Feasibility

This measure is not applicable to the proposed Project because the project does not include rail operations.

B.5 NNI Heavy-Duty Vehicles Measures

This section discusses the feasibility of applying or adapting the NNI Control Measures for Heavy-Duty Vehicles (HDV) as part of the SEIS/SEIR. The proposed Project does not include any Heavy Duty Vehicles.

B.5.1 HDV1 – 2004 On-Road Standards for Heavy-Duty Diesel Vehicles

Description

New on-road standards under Phase I of the USEPA Rule (Control of Emissions of Air Pollution from Highway Heavy Duty Engines) targets highway diesel vehicles greater than 8,500 pounds gross vehicle weight built for model year 2004 and beyond to reduce NO_x, HC, and PM emissions. The new emissions standard represents a combined reduction in the emissions limit of approximately 40 percent from the former standard.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.2 HDV2 – 2007 On-Road Standards for Heavy-Duty Diesel Vehicles

Description

The control measure will reduce NO_x, HC, and PM emissions by building on Phase I emission standards (HDV1). This USEPA rule covers Phase II in a comprehensive nationwide program for controlling emissions from heavy-duty engines, and is based on the use of high-efficiency exhaust emission control devices and the consideration of the vehicle and its fuel as a single system. The rule is expected to reduce PM and NO_x emission levels to 90 and 95 percent below the 2004 standard, respectively. The standards will be effective in the 2007 model year, and the low-sulfur diesel fuel needed to facilitate the standards will be available in mid-2006. New evaporative emission standards are also contained in the rule.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.3 HDV3 – Gateway Cities Truck Modernization Program

Description

Under his measure, the Port would continue to fund the Gateway Cities Truck Modernization Program, under which commercial truck owners who replace their diesel trucks (with older engines) for models with newer, cleaner-burning engines are subsidized for the cost of the purchase. This program would reduce NO_x and PM emissions. Funding from the Port of Los Angeles for the Gateway Cities program is expected to replace approximately 400 trucks by mid-2006. The Board has directed staff to move away from diesel technology in favor of alternative fuels, preferable LNG. Until heavy-duty, on-road, alternative fuel-powered trucks become available, however, staff will continue to fund the Gateway Cities projects that preceded the Board's directive and will continue to do so throughout most of 2006. The program will then be refocused away from diesel toward LNG.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.4 HDV4 – Engine Software Upgrade (or Low NO_x Software Upgrade)

Description

Under this measure, the CARB requires the installation of low NO_x software in heavy-duty diesel vehicles with 1993 to 1998 model year engines for which low NO_x software was developed under the federal Consent Decrees. Most 1993 to 1999 model year heavy-duty diesel trucks with engines manufactured by Caterpillar, Cummins, Detroit Diesel Corporation, Mack/Renault, Volvo, and International are eligible for low NO_x software.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.5 HDV5 – Ultra-Low-Sulfur Diesel Fuel (15 ppm)

Description

The CARB requires diesel fuel produced or offered for sale in California for use in any on-road or nonroad vehicular or stationary diesel engines to contain no more than 15 ppm sulfur by weight, beginning June 2006. Full implementation of the fuel requirement will commence in mid-2006 to accommodate new vehicular engine standards in model years 2007 to 2010.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.6 HDV6 – Heavy-Duty Vehicle Inspection

Description

Under this measure, the CARB would continue to implement the Heavy Duty Vehicle Inspection Program where CARB staff inspects trucks and buses for excessive smoke to reduce PM emissions. The inspections take place at border crossings, California Highway Patrol (CHP) scales, and other locations that do not hinder traffic flow. Trucks and buses with excessive smoke are subject to fines starting at $300.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.7 HDV7 – Periodic Smoke Inspection Program

Description

Under this existing and ongoing CARB program, owners of California-based fleets with two or more vehicles are required to perform annual smoke opacity tests on their heavy-duty, diesel-powered vehicles with a gross vehicle weight greater than 6,000 pounds to reduce PM emissions.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.8 HDV8 – Augment Truck and Bus Highway Inspections with Community-Based Inspections

Description

Under this existing CARB measure, and in concert with fuel and hazardous waste inspections, heavy-duty vehicles are inspected in mixed use communities (residential/ commercial/industrial areas) to detect maintenance issues and tampering, and to measure smoke emissions.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.9 HDV9 – Reduced Truck Idling

Description

This existing CARB measure requires that the driver of diesel-fueled commercial motor vehicles with a gross vehicle weight of greater than 10,000 pounds to limit idling of the vehicle primary diesel engine for up to 5 minutes at any location. Operation of a diesel-fueled auxiliary power system (APS) to power a heater, air

conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth is limited to 5 minutes or less at any location when within 100 feet of a restricted area.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.10 HDV10 – Expanded Truck Modernization Program

Description

This measure would expand the existing Truck Modernization Program, (HDV3) through the provision of subsidies for the installation of DOC on trucks before June 2006 and DPFs on trucks that will be replaced after 2006. This also applies to the replacement of trucks built from 1987 to 2006 over a 19-year period (to 2025).

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.11 HDV11 – California Heavy-Duty Diesel Vehicle Standards and Fleet Modernization for Mexican Trucks

Description

Under this measure, the CARB will require that all Mexican trucks servicing the Port (if any) comply with the California On-Road Heavy-Duty Diesel Emission Standards applicable to the engine model year at the time the engine was manufactured. Mexican heavy-duty diesel trucks will soon be permitted to travel beyond the restricted mileage range of the Mexican/U.S. border under the North American Free Trade Agreement (NAFTA) policy. It is anticipated that a portion of the heavy-duty diesel trucks serving the Port of Los Angeles will be made up of these Mexican vehicles. Compliance with AB 1009, which was chaptered into law in September 2004, may effectively fulfill the requirements of this measure because the bill requires the CARB, in cooperation with the CHP, to develop protocols to ensure that vehicles entering the state (particularly Mexican vehicles) provide evidence that the truck engine meets the federal standards for the applicable model year at the time it was manufactured.

Feasibility

This measure is not applicable to the proposed Project operations because the project does not include heavy duty diesel trucks except during the construction phase.

B.5.12 HDV12 – Early ULSD Implementation

Description

Under this measure, the availability of ULSD for on-road trucks servicing the Port would be accelerated to facilitate early installation of DPFs to reduce PM emissions.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.13 HDV13 – Retrofit Heavy-Duty Diesel Vehicles with Diesel Oxidation Catalysts

Description

Under this measure, diesel PM from on-road trucks would be reduced by approximately 20 percent through the installation of DOCs, which would be installed on all Gateway Cities-funded on-road trucks (model year 1993 and older) from the NNI plan adoption to June 2006 and on all trucks funded prior to plan adoption.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.14 HDV14 – Retrofit Heavy-Duty Diesel Vehicles with Diesel Particulate Filters

Description

This measure would require and provide subsidies for the installation of DPFs on model years 1994 to 2006 heavy-duty diesel trucks serving the Port of Los Angeles. This measure focuses on (1) the portion of the truck fleet that will not participate in the Expanded Truck Modernization Program (HDV10) until 2009 and (2) those trucks replaced under the Expanded Truck Modernization Program prior to June 2006, after which DPFs will be installed as standard equipment.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.15 HDV15 – PM In-Use Emission Control

Description

Under this measure, the CARB will require public and private on-road truck operators to aggressively reduce PM emissions from their truck/bus fleets. The strategies that operators select must have CARB-verified emission reductions or involve the use of CARB-certified engines and must meet the emission reduction targets specified by the truck/bus fleet rules.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.16 HDV16 – On-Board Diagnostics for Heavy-Duty Trucks

Description

Under this measure, the CARB will require heavy-duty engines used in trucks to be equipped with on-board diagnostic (OBD) systems that monitor the emission controls on the engine and detect a fault when one or more of the emission-related components is malfunctioning. Upon detecting a fault, the system illuminates a warning lamp on the dash and stores fault information that can be used by repair technicians to identify the cause of the fault. This measure, as proposed, would require implementation on all 2010 and subsequent model year engines to reduce NO_x, PM, HC, and CO emissions.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks. .

B.5.17 HDV17 – Transportation Refrigeration Units

Description

Under this measure, the CARB would accelerate the implementation dates of the CARB ATCM for transportation refrigeration units (TRUs) serving the Port of Los Angeles. Under the ATCM for TRUs, TRUs operating within the state are required to meet in-use performance standards that vary by horsepower range. These standards can be met by using an engine that meets a required engine-certified emission level, equipping the TRU with a verified diesel emission control system (VDECS), or using an alternative technology (e.g., electrification).

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.18 HDV18 – Electrified Truck Spaces

Description

Under this measure, the Port would require heavy-duty diesel trucks serving the Port of Los Angeles to use off-truck electrical systems while parked at truck spaces in lieu of idling the main drive or auxiliary engines. Electrification of truck spaces is the action of using off-truck electric power to operate on-truck or trailer TRUs, in-cab appliances, or directly supplied heating and air conditioning while heavy-duty diesel trucks are parked in truck spaces. Truck space electrification allows the truck operator to run the on-truck or trailer systems without operating the truck main drive or auxiliary engine, thereby reducing NO_x and PM emissions.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

B.5.19 HDV19 – Idling Reduction Measures

Description

Under this measure, reducing idling times (beyond the truck idling reductions in HDV9) would lower PM emissions from heavy-duty vehicles. The additional idling-reduction measures are currently unspecified, but could include development of a standard for terminal turn-times.

Feasibility

This measure is not applicable to the proposed Project because the project does not include heavy duty diesel trucks.

The measures contained in the following table were developed by the No Net Increase Task Force to decrease net air emissions in the Port. Each mitigation measure is assessed in relation to the specific project as defined in the SEIS/SEIR. A mitigation measure is considered feasible if all categories are marked "Yes". If a mitigation is not found feasible, an explanation of why follows this chart.

NNI Air Quality Mitigation Measures					
	Measure	**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
	OCEAN-GOING VESSELS				
OGV1	New Engine Standards for Ships	Yes, air pollutant emissions.	Possible	Possible	No, however tenant will be required to confer with ship builders on all future purchases to include environmental design measures.
OGV2	Vessel Speed Reduction (VSR) MOU	Yes, air pollutant emissions.	Yes	Yes	Yes
OGV3	Alternative Maritime Power (AMP)	Yes, air pollutant emissions.	Yes	Yes	Yes
OGV4	Auxiliary Engine Fuel Improvement Program	Yes, air pollutant emissions.	Yes, for ship emissions.	Yes	Yes
	Engine Standards				
OGV5	New Engine Standards for Category 3 Marine Engines	Yes, air pollutant emissions.	Yes, for ship emissions.	Possible	No, however, future EPA engine standards would reduce unmitigated Project emissions and the tenant will be required to confer with ship builders on all future purchases.
OGV6	Reroute Cleaner Ships	Yes, air pollutant emissions.	Yes, for ship emissions.	No	No, however, the project is expected to attract larger ships which tend to be newer and cleaner

NNI Air Quality Mitigation Measures					
Measure		**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
OGV7	Low Emission Main Propulsion Engines	Yes, air pollutant emissions.	Yes, for ship emissions.	Possible	No, however tenant will be required to confer with ship builders on all future purchases to include environmental design measures.
	Fuel Requirements				
OGV9	Cleaner Fuels for Ship Auxiliary Engines	Yes, air pollutant emissions.	Yes, for ship emissions.	Yes	Yes
OGV10	Main Engine Fuel Improvement Program	Yes, air pollutant emissions.	Yes, for ship emissions.	Yes	Yes
OGV11	Creation of a Sulfur Emission Control Area (SECA)	Yes, air pollutant emissions.	Yes, for ship emissions.	No, no Port control.	No, however, Goal is met by a mitigation measure
OGV12	Expanded Auxiliary Engine Fuel Improvement Program	Yes, air pollutant emissions.	Possible, study underway.	Possible, feasibility study in process.	Yes
OGV13	Expanded Main Engine Fuel Improvement Program	Yes, air pollutant emissions.	Possible, study underway.	Possible, feasibility study in process.	Yes
	Repower/Retrofit				
OGV14	Additional Auxiliary Engine Reductions for Frequent Callers	Yes, air pollutant emissions.	Yes, for ship emissions.	No, no Port control.	No
OGV15	Retrofit/Repower Requirements for Infrequent Callers	Yes, air pollutant emissions.	Yes, to offset ship emissions.	No, no Port control, but is expected by 2015.	No
	Operational Efficiencies or Improvements				
OGV16	Expanded VSR Program	Yes, air pollutant emissions.	Yes, for ship emissions.	Yes	Yes
OGV17	Expanded AMP	Yes, air pollutant emissions.	Yes, for hoteling emissions.	Yes	Yes

NNI Air Quality Mitigation Measures					
Measure		**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
OGV18	Additional In-Use Measures for Ships	Yes, air pollutant emissions.	Yes	No, no Port control.	No, however, future EPA or CARB regulations may reduce unmitigated Project emissions and mitigation includes a future technology lease clause.
	HARBOR CRAFT				
HC1	New Engine Standards for Harbor Craft	Yes	Yes	No, no Port control.	No, however, new EPA engine standards have been promulgated and will reduce unmitigated Project emissions as new harbor craft are added to the fleet.
HC2	Clean Fuels for Harbor Craft	Yes	Yes	Yes	No, however, measure is assumed in baseline emissions calculations.
HC3	Early Implementation of Ultra Low Sulfur Diesel (ULSD)	Yes	Yes	Yes	Yes
HC4	Dredging Activities	No	No	No, no impacts	No
HC5	Technical Advisory Committee (TAC) Harbor Craft Measures				No, however, the Port's tugboat repowering program is being implemented on a Portwide basis and will reduce Project emissions.
	Engine Standards				
HC6	New Engine Standards for Category 1 and 2 Marine Engines	No	No	No, no Port control.	No, however, future USEPA engine standards may reduce unmitigated Project emissions.
	Fuel Requirements				
HC7	Emulsified Fuels	Yes	Yes	No	Emulsified Fuels are no longer avaialble.

NNI Air Quality Mitigation Measures					
	Measure	**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
	Repower/Retrofit				
HC8	In-Use Harbor Craft Emission Reduction Measure/Airborne Toxic Control Measure (ATCM)	Yes	Yes	No, no Port control.	No
HC9	Repower Existing Harbor Craft	Yes	Yes	Yes	Ongoing Portwide program, not listed as Project mitigation.
HC10	Retrofit Existing Harbor Craft	Yes	Yes	Yes	No, would have to occur at a Portwide level.
	Operational Efficiencies or Improvements				
HC11	AMP-Ready Staging Areas	Yes	Possible	No, AMP not cost effective.	No
	CARGO HANDLING EQUIPMENT				
CHE1	Emission Standards for Heavy-Duty Nonroad Diesel Engines	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE2	Yard Tractor Modernization and ULSD Programs	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE3	Early Implementation of ULSD for CHE (Other than Yard Tractors)	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE4	Alternative Fuel Yard Tractor Resolution	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE5	Emulsified Fuels	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE6	Technical Advisory Committee (TAC) CHE Measures	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No

NNI Air Quality Mitigation Measures					
	Measure	**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
	Engine Standards				
CHE7	Expanded Yard Tractor Modernization	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
CHE8	Enhanced CHE Modernization	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
	Repower/Retrofit				
CHE9	Cargo Handling Equipment at Ports and Intermodal Rail Yards	No, project does not include cargo handling equipment.	Not Applicable	No, project does not include cargo handling equipment.	No
	RAIL				
R1	Tier 0, 1, and 2 Engine Standards for New and Remanufactured Locomotives and Locomotive Engines	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R2	ARB Diesel Fuel Used by Intrastate Locomotives	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R3	Federal Standards for Nonroad Diesel Fuel	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R4	Memorandum of Understanding (MOU) in the South Coast Air Basin	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R5	PHL Switcher Locomotive Modernization and ULSD Programs	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
	Engine Standards				
R6	Ultra-Low Emission Switcher Locomotives: PHL	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R7	Ultra-Low Emission Switcher and Line Haul Locomotives: Class 1	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R8	Tier 3 Engine Standards for New and Remanufactured Locomotives and Locomotive Engines	No, project does not include rail.	Not Applicable	No, project does not include rail.	No

NNI Air Quality Mitigation Measures					
	Measure	**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
R9	**Fuel Requirements**				
R10	ARB Diesel Fuel for Class 1 Railroad Locomotives	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
	Repower/Retrofit				
R11	Idling Controls for Switcher and Line Haul Locomotives	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
	Operational Efficiencies or Improvements				
R12	Efficiency Improvements on In-Use Class 1 Rail Equipment	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
R13	Electrification of Alameda Corridor and Alameda Corridor East	No, project does not include rail.	Not Applicable	No, project does not include rail.	No
	HEAVY DUTY VEHICLES				
HDV1	2004 On-Road Standards for Heavy Duty Diesel Vehicles	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes
HDV2	2007 On-Road Standards for Heavy-Duty Diesel Vehicles	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes
HDV3	Gateway Cities Truck Modernization Program	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV4	Engine Software Upgrade (or Low NOx Software Upgrade)	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV5	Ultra Low Sulfur Diesel Fuel (15 ppm)	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV6	Heavy-Duty Vehicle Inspection	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV7	Periodic Smoke Inspection Program (PSIP)	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV8	Augment Truck and Bus Highway Inspections with Community-Based Inspections	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV9	Reduced Truck Idling	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes

NNI Air Quality Mitigation Measures					
	Measure	**1. Does the Project have significant air emissions from the specific source?**	**2. Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact from the source?**	**3. (b) Is the measure feasible? (If not, why?)**	**Mitigation Measure**
	Engine Standards				
HDV10	Expanded Truck Modernization Program	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes
HDV11	California Heavy-Duty Diesel Vehicle Standards and Fleet Modernization for Mexican Trucks	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
	Fuel Requirements				
HDV12	Early ULSD Implementation	No, project does not trucks	Not Applicable	No, project does not include trucks.	No, would be implemented at a Portwide level.
	Retrofit/Repower				
HDV13	Retrofit Heavy-Duty Diesel Vehicles with Diesel Oxidation Catalysts (DOC)	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes
HDV14	Retrofit Heavy-Duty Diesel Vehicles with Diesel Particulate Filters (DPF)	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes
HDV15	PM In-Use Emission Control	No, project does not trucks	Not Applicable	No, project does not include trucks.	No, but goals would be met through mitigation measure.
	Operational Efficiencies and Improvements				
HDV16	On-Board Diagnostics (OBD) for Heavy-Duty Trucks	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV17	Transportation Refrigeration Units (TRU)	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV18	Electrified Truck Spaces	No, project does not trucks	Not Applicable	No, project does not include trucks.	No
HDV19	Idling Reduction Measures	No, project does not trucks	Not Applicable	No, project does not include trucks.	Yes

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PCAC Mitigation Measures

Aesthetics Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: REDUCES AESTHETIC VALUE				
GENERAL				
A-2	**No Negative impacts on Port Property –** Remove or minimize or limit all negative impacts.	No	No	No, as no such impacts are anticipated.
A-3	**Greening of Port Property –** Greening landscape, create open landscapes	No	No	No, as no such impacts are anticipated.
A-10	**Beautification –** Conduct beautification and aesthetic enhancement on and off Port property, including streetscape improvements and a replica of the Vincent Thomas Bridge.	No	No	No, as no such impacts are anticipated.
A-6	**Mature Trees –** Plant mature trees and shrubs along the I-110 (Harbor) Freeway.	No	No	No, as no such impacts are anticipated.
CRANES				
A-1	**Alternate Cranes –** Low profile, mobile	No	No	No, use of cranes is not applicable to operations for the proposed Project and no such impacts are anticipated.
A-11	**Mobile Cranes –** Use lower profile mobile cranes.	No	No	No, as no such impacts are anticipated.
	Paint Cranes – Paint cranes light blue	No	Yes	No, as no such impacts are anticipated.
A-14	**Aesthetic Improvements –**Move cranes away from the bridge and use less of them	No	No	No, as no such impacts are anticipated.
A-19	**Mitigation for Cranes –** Apply mitigation to avoid light and glare impacts to migrating birds. Cranes should be located further from the bridge.	No	No	No, as no such impacts are anticipated.

Aesthetics Measures

	Subcommittee Recommendation:	CEQA Criteria for Mitigation Measures		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
BACKLANDS				
A-16	**Reduce Backland –** Scale back the 35-acre backland creation; leave water visible from the freeway and create a sandy beach "marine stadium" strip for dragon boat races, etc	No, constainer backlands are not part of this project	No	No, backlands are not part of the proposed Project so no such impacts are anticipated.
A-21	**Inspection/Maintenance –** Leases to provide for inspection program, maintenance for container storage facilities	No, constainer storage facilities are not part of this project.	No	No, as backlands are not part of the project. However, the proposed Project includes regular maintenance for tanks at the tank farms.
	Maintain Facilities – There should not be any peeling paint, debris, etc	No, backlands are not part of this project.	No	No, as backlands are not part of the project. The proposed Project includes regular maintenance for tanks at the tank farms.
	Fencing – Prohibit chain link fencing; use decorative fencing	No, Chain link fencing is necessary for security purposes	No	No, Chain link fencing is necessary for security purposes
LIGHTING				
A-5	**Lighting/Glare –** International Dark Sky Association to consult on lighting/glare issues	No	No	No, Project would not result in lighting impacts so the mitigation doesn't apply.
A-8	**Night Lights –** Port to establish a plan to minimize the impact of night-light emitted by the Port. Turn off lights when not needed and employ motion detection lighting and infrared systems.	No	No	No, as no such impacts are anticipated.
A-9	**Reduced Lighting –** use reduced lighting at facilities not in operation at night	No	No	No, as no such impacts are anticipated.
A-54	**Lighting –** Replace obsolete street lighting fixtures in San Pedro and Wilmington with state-of-the-art, full cutoff fixtures and undergrounding of power lines	No	No	No, as no such impacts are anticipated.
A-7	**Sunlight Glare –** Obscure sunlight glare from bright surfaces using dull paint or vegetation.	No	No	No, as no such impacts are anticipated.

Aesthetics Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
A-22	**Welcome Park –** This proposal is for a Welcome Park to be built at the entrance to San Pedro at the southern terminus of the I-110 freeway. The project goal is to replace vacant land and existing blighted properties with an attractive Welcome Park.	No	No	No, as no such impacts are anticipated.
A-23	**East Wilmington Greenbelt –** This proposal is for land acquisition and improvements to the East Wilmington Greenbelt, a City of Los Angeles public park. The project goal is to replace vacant land and existing blighted properties with an expansion of the Greenbelt	No	No	No, as no such impacts are anticipated.
A-28	**Northwest Harbor Beautification Project –** Landscaping and beautification of two areas in the Northwest Harbor area of the Port of Los Angeles, in San Pedro. The areas to be improved, Area A and Area B, include two gateways to the Port: the area adjacent to the Channel Street on an off ramps from the 110 and 47 Freeways; and, the Harbor Boulevard on and off ramps from the 47 Freeway.	Yes	Yes	No, as no such impacts are anticipated.
A-50	**Linkages projects –** Fund and implement projects under development by LA Harbor-Watt Economic Development Corporation and California Coastal Conservancy	No	No	No, as no such impacts are anticipated.
A-51	**Small Business Grants/Loans –** Provide loans/grants for small businesses in Wilmington and Pacific Avenue Corridor Redevelopment Project Area of San Pedro to rehabilitate, upgrade, and improve their propertie	No	No	No, as no such impacts are anticipated.
A-52	**Knoll Hill –** Dedicate Knoll Hill in perpetuity as a public open space.	No	No	No, as no such impacts are anticipated.
A-53	**Public open space –** Create open space/parks in Wilmington equal to Knoll Hill acreage	No	No	No, as no such impacts are anticipated.
Portion of A-13	**North Gaffey –** Create a river walk boardwalk along North Gaffey.	No	No	No, as no such impacts are anticipated.
A-15	**Pedestrian Walkway –** Use boardwalk for light rail lines, walkways to cruise terminals, Harbor College, Wilmington, and streets.	No	No	No, as no such impacts are anticipated.

Air Quality				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible? (if not, why?)**
IMPACT: AIR EMISSIONS IN EXCESS OF SCAQMD THRESHOLDS				
GENERAL				
AQ-17	**No Net Increase –** Use all known programs to attain no net increase.	Yes, terminal construction and operation will emit air pollutants.	Yes	All feasible No Net Increase measures are included as Project mitigation. See Appendix B, NNI Mitigation Measures Section
AQ-5	**Alternative Fuels –** Port to require its tenants to use less polluting fuels.	Yes, terminal construction and operation will emit air pollutants.	Yes	No, the Project does not include applicable equipment.
AQ-42	**Refuel –** Use alternative fuels and cleaner diesel fuels.	Yes, terminal construction and operation will emit air pollutants.	Yes	No, the Project does not include applicable equipment.
AQ-11	**Retrofit Equipment –** Retrofit existing trucks, trains and equipment with oxidation catalysts or particulate traps.	Yes, terminal construction and operation will emit air pollutants.	Yes	Yes, included in Project Mitigation for construction impacts
AQ-35	**Electrification –** Implement electrification for mitigation of air quality toxins.	Yes, terminal construction and operation will emit toxic air pollutants.	Yes	Yes, included in Project Mitigation
SHIPS				
AQ-32	**Bunker Alternative Fuel –** Include ship bunker – alternative fuel as a lease requirement.	Yes	Yes	Yes, included in Project Mitigation
AQ-15	**Low Sulfur Fuels –** Use low sulfur fuels on ships.	Yes, ship operation will produce air pollutants.	Yes	Yes, included in Project Mitigation
AQ-10	**Electric Power –** Use electric power for equipment and plug ships into shore power.	Yes, ship hoteling produces air emissions.	Yes	Yes, included in Project Mitigation
AQ-25	**BAT Ships Required by Lease –** Require that leases use the Best Available Technology ships with engine designs that are 80% pollution free. Older ships should be required to incorporate technologies which reduce air pollutants.	Yes, ship operation will produce air pollutants.	Partial	No, no Port control. However, most ships visiting the terminal are new and will have BAT by default. The project will also include a measure to consider new technology on all new ship builds.
AQ-38	**Electrical Power for Docking –** Install electrical power for hoteling ships at the terminal and retrofit ships for electrical power while docked at the Port.	Yes, ship hoteling produces air emissions.	Yes	Yes, included in Project Mitigation

Air Quality				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible? (if not, why?)**
TRUCKS				
AQ-30	**Fuel Requirements –** Require the Port, its terminal operators and shipping companies and all lease tenants to require the use of alternative fuels with all their subcontracted or leased common carriers and owner operated diesel trucks.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-40	**Remanufactured Engine Repowers –** Repower trucks with newer engines to lower emissions.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-22	**Low Emission Transport –** Use zero or low emission transport for cargo.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-37	**Environmental Truckers –** Require China Shipping to deal only with trucking companies that meet an environmental and safety standard.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-19	**Retire Old Trucks –** Implement a finance program to retire old, high-polluting trucks with newer, cleaner vehicles.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-24	**Truck Loans –** Establish a $10 million low interest new truck loan program.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-33	**Turn Off Engines –** All trains and idling trucks should turn off engines to reduce Port pollution.	No. The proposed Project does not include heavy duty diesel trucks for drayage.	No	No. The proposed Project does not include heavy duty diesel trucks for drayage.
AQ-44	**Reduce Idling –** Procedural changes and technology	Yes, terminal construction will involve trucks that emit air pollutants.	Yes	Yes, construction phase truck idling is restricted under a mitigation measure.
AQ-41	**Fleet Modernization –** Replace pre-1984 with post-1993 trucks in specific vocations.	Yes, terminal construction will involve trucks that emit air pollutants.	Yes	Yes, project includes this as a mitigation measure.

Air Quality				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible? (if not, why?)**
YARD EQUIPMENT				
AQ-6, 43	**After Treatment –** Equipment which cannot use alternative fuel engines should be installed with after-treatment devices to reduce emissions.	No, project does not include yard equipment	No	No, project does not include yard equipment
AQ-46	**DPFs –** Use of Diesel Particulate Filters on dockside equipment.	No, project does not include yard equipment	No	No, project does not include yard equipment
AQ-47	**Repower –** 14 Wheel Scrapers with Tier II Caterpillar D3456 Engines.	No, project does not include yard equipment	No	No, project does not include yard equipment
AQ-21	**Terminal Yard Tractors –** Use terminal yard tractors compliant with EPA on-road regulations.	No, project does not include yard equipment	No	No, project does not include yard equipment
AQ-27	**Non-Polluting Fuels –** Port to establish a timeline for the phasing out of diesel vehicles and equipment for non-polluting fuels.	No, project does not include yard equipment	No	No, project does not include yard equipment
RAIL				
AQ-18, 34	**Electrify Rail**	No, project does not involve rail transport.	No	No, project does not involve rail transport.
AQ-36	**Electric Cranes –** Use electric cranes to reduce diesel emissions.	No, project does not involve rail transport.	No	No, project does not involve rail transport.

Air Quality				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible? (if not, why?)**
BACKLANDS AND BUILDINGS				
AQ-14	**Solar Energy –** Implement a solar energy plan with solar panels on new and old buildings, DC electricity operated equipment, and a budget to pay for equipment conversion.	Yes	Yes	Yes, In addition, proposed administration building will be built to LEED standards and will incorporate energy saving designs/measures.
AQ-26	**Automation of Port Operations –** Port to automate their operation and to utilize BAT for container or liquid bulk unloading, loading, storage, transportation, and distribution.	No	No	No, not applicable to the proposed Project.
AQ-45	**Automated Reservation Systems –** Employ Just-In-Time scheduling for terminals.	No	No	No, not applicable to the proposed Project.
AQ-20	**Eliminate Toxic Products –** Eliminate the use of high VOC and toxic chemical products.	No	No	No, not applicable to the proposed Project.
FINANCIAL INCENTIVES AND MITIGATION				
AQ-12	**Mitigation Funds –** Target mitigation funds to San Pedro and Wilmington.	No	Yes, provided there is a nexus between fund usage and Project impact.	No, no impact identified.
AQ-13	**Container Taxation –** Use a portion of container taxation funds (based on adherence to environmental standards) for community improvements.	No	No	No, this project does not involve containers.
AQ-29	**Tax Old Technologies –** Levee a charge of up to $100, based on pollutants emitted, for every container that moves through the Port using conventional technology.	No	No	No, no Port control.

Air Quality				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible? (if not, why?)**
MONITORING				
AQ-16	**Air Monitoring Systems –** Port to establish and maintain air monitoring systems	Yes, Project will emit air pollutants.	No	Yes, ongoing Port project.
AQ-23	**Onsite Air Quality Monitoring –** Establish an onsite air quality program with daily monitoring and baseline prior to beginning construction. Program shall include an action plan for times when pollution exceeds legal standards.	Yes, Project will emit air pollutants.	No	Ongoing Port project. Air quality monitoring stations have been established in areas best able to monitor direct Port impacts.
AQ-4	**Reports –** Port to furnish annual and 10-year summary reports. (Potential global practice, applied to all impact areas)	No	No	Ongoing Port project. Port to prepare annual reports on environmental programs including mitigation measures
AQ-48	**Reduce Port operations when pollutant levels rise above a given threshold.**	Yes, Project emissions will exceed SCAQMD thresholds.	Yes	No, Portwide operations are continuous and cannot be reduced at a moments notice.
SPECIFIC PROJECTS				
AQ-39	**A/C Filter –** Provide A/C filter residential indoor quality.	No	No	No, no indoor air quality impacts are anticipated.
AQ-1	**Public Health Trust Fund –** Annual $10 million fund to pay for local health care to mitigate the health impacts of China Shipping.	Yes, the Project would emit air pollutants and pose a potential health risk.	Not directly	HRA is not significant therefore no Project impact nexus. Port programs are designed to reduce emissions to reduce potential future health impacts.
AQ-2	**Health Survey –** Conduct a Harbor Community Health Survey/Study to determine any nexus between Port activities and local health.	Yes, the Project would have potential health risks.	No, a study is not mitigation.	HRA is not significant therefore no Project impact nexus.
A-36	**Partners for Healthy Kids –** A mobile pediatric clinic which travels to school sites in San Pedro and Wilmington, along with other South Bay schools, each week, providing children with free diagnosis and treatment of acute medical conditions, immunizations, health education and	No	No	HRA is not significant therefore no Project impact nexus.
AQ-3	**Health & Environmental Directory –** Publish and distribute a directory of agencies and officials who may be contacted regarding environmental and health problems.	No	No	HRA is not significant therefore no Project impact nexus.
AQ-28	**School Bus Replacement –** Replace diesel powered school buses with CNG or LNG.	No	No	HRA is not significant therefore no Project impact nexus.
AQ-31	**Mitigate Off-Port Properties –** Implement additional mitigation outside Port properties.	No	No	HRA is not significant therefore no Project impact nexus.

Biological Measures				
		CEQA Criteria for Mitigation Measures		
	Subcommittee Recommendation:	**Does the Project have a significant physical impact in this area?**	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: HABITAT LOSS/DEGRADATION				
BR -1	**Habitat Compensation** – Compensation for direct impacts to fish and wildlife habitat would be proposed in the form of habitat replacement, restoration, or improvement.	No	No	No, as impacts related to habitat loss/degradation are not anticipated.
BR-3	**Restoration Plan** – Require the Port to sponsor a public conference to discuss and consider the possibility of developing a San Pedro Restoration Plan. (from land use)	No	No	No, as impacts are not anticipated.
A-32	**Freshwater Preservation/Habitat Restoration** – Proposal is for open space, landscaping, beautification, and education. The objective is to replace weed infested and ornamental landscaping and riparian areas with native vegetation, enhance a natural freshwater source, connect a freshwater marsh to a saltwater marsh through habitat trail, and resurrect an ecosystem disrupted by Port operations.	No	No	No, as impacts are not anticipated.
IMPACT: SPECIES LOSS/HARM				
BR-2	**Invasive Species** – Require shippers to bond for costs of eradicating invasive species potentially introduced.	Yes	Yes	No, as impacts are not anticipated to due compliance with Ballast Water management measures.

Traffic Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: INCREASED CONGESTION				
GENERAL				
T-3	**Traffic Routing Plan –** Establish a Port Vehicle Traffic Routing Plan, Parking Plan, and City Code Compliance Education Class.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-16	**Additional Police –** Require the Port to hire additional Port police to protect the harbor community and enforce trucking restrictions.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-12	**Bridges for Emergency Vehicles** – Ensure that there are a sufficient number of bridges over rail routes so emergency vehicles can drive around obstructions.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-6	**Implementation of Mitigation** – Traffic mitigation proposals should include financing, scheduling considerations, implementation responsibilities, monitoring plans.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-21	**Traffic Mitigations** – Re-phase improvements to Harbor Boulevard to occur under Phase 1 to mitigate for traffic impacts during Phase 1.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-5	**Community Impact Assessment Study** – Conduct a Portwide truck, train, container, ship, rail and bridge traffic Community Impact Assessment Study, including project specific and cumulative impacts.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
TRUCKS				
T-11	**Off-Peak Traffic** – Require a traffic demand management plan for all diesel trucks to direct truck traffic to off-peak hours.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-2b	**Truckers Paid Hourly –** Consider having truckers paid by the hour rather than by the job, in order to motivate shippers to more efficiently load cargo and deploy trucks.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-7	**Ticket Trucks** – Increase money to Port Police and LAPD monitors to ticket illegally parked trucks and those using routes not designated for trucks.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-9	**Trucking Restrictions** – Restrict truck movements from residential neighborhoods.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-19, short term only	**Truck Routing** – Require trucks to use only the C Street on and off ramps.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-11, study further	**Off-Peak Traffic** – Require a traffic demand management plan for all trucks to direct truck traffic to off-peak hours.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-22	**On-Port Truck Parking –** Provide onsite areas for overnight truck parking to avoid parking in neighborhoods	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project

Traffic Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
BACKLANDS				
T-8	**Routing** – Improve routing to move cargo more efficiently.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-4	**Lease Agreements** – Establish lease agreements with conditions on truck traffic.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-13	**Backlands and Off-Peak Use** – Require cargo be delivered or removed from backlands on a strict timetable. Extend Port hours of operation so that more throughput can be obtained from a single facility; have berths shared by one or more shippers.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-24	**Shared Facilities** – Adopt shared facility use by multiple shippers to allow use of first available berth. (also could help reduce air emissions)	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-14	**Integrated Traffic Demand System –** Operate terminals as part of an integrated traffic demand system.	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
T-23	**Computerized schedule –** Use computerized scheduling and truck deployment to move cargo	No, there are no truck trips as part of this project	Not Applicable	No, there are no truck trips as part of this project
RAIL				
T-10	**Rail Incentive** – Develop an incentive program for Port tenants to use rail rather than trucks.	No, there are no rail trips as part of this project	Not Applicable	No, there are no rail trips as part of this project
T-17	**Alameda Corridor –** Maximize use of the Alameda Corridor and provide any needed improvements to the corridor.	No, there are no rail trips as part of this project	Not Applicable	No, there are no rail trips as part of this project

Land Use and Planning Measures				
	Subcommittee Recommendation:	**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: INCOMPATIBLE LAND USE AND PLANNING				
	TERMINAL			
LU-3	**Storage Yard Permits –** Require the Port to verify that any terminal operator, shipping company, or lease tenant that stores containers off Port property provide evidence that the storage yard has all proper permits or licenses and include this requirement in all lease contracts.	No, the project does not involve containers	Not Applicable	No, the project does not involve containers
LU-11	**Limit Container Storage Time** – Limit the time a container can stay at one storage location; achieve compliance through financial penalties.	No, the project does not involve containers	Not Applicable	No, the project does not involve containers
	LEASES/TENANT AGREEMENTS			
LU-4, move to general section	**Mitigation Measures in Lease Agreements –** Mitigation measures must be included in lease provisions for the Project site. This shall include compliance with all laws and regulations.	Yes	Yes	Yes, The MMRP becomes part of the lease and is enforceable.
LU-2	**Environmentally Responsible Shippers** – Establish business practices with shippers to reduce environmental problems and public health risks, including liability statements and bonds to ensure that shippers act responsibly and do not deliver invasive species.	Shippers are not allowed to release ballast water into harbor waters per legislation.	Not Applicable	Shippers are not allowed to release ballast water into harbor waters per legislation.
LU-10	**Incentives to Port Tenants – Environmental Justice** Offer incentives to Port tenants for placing off-Port business offices within the business communities of San Pedro and Wilmington.	No	No	No, as no impacts are anticipated.
LU-13	**Limit Lease Term** – Limit the China Shipping Line Terminal lease to a maximum of 10 years. Do not renew all current leases for tenants that border San Pedro and Wilmington to allow time for the Harbor communities to research the possibility of establishing and implementing a San Pedro Bay Restoration Plan.	Not Applicable, this is not the China Shipping lease	Not Applicable	Not Applicable, this is not the China Shipping lease
	PUBLIC OUTREACH			
LU-7	**Contact Information For Residents** – Port to provide residences within 10 miles notification of its construction and Mitigation Master Plan. Construction plans must include means of contact 24/7.	Partial; construction impacts are not likely to affect all residences out to 10 miles.	No	No, as construction impacts out to 10 miles are not anticipated.
	MITIGATION MONITORING			
LU-14	**Monthly Monitoring Plan** – Adopt a NEPA, CEQA, and Mitigation Plan monthly reporting and monitoring program that is designed to ensure compliance during and subsequent to the China Shipping construction project.	Yes	N/A	Yes. Monthly monitoring for some measures may not be applicable, but routine monitoring will be implemented through the MMRP.

Land Use and Planning Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
CONSTRUCTION				
LU-9	**Construction and Mitigation Plan** – Publish and distribute a construction and mitigation plan.	Yes.	Yes	Yes, distribution will occur.
PORTWIDE PLANNING				
LU-5	**Updated Master Plan** – Prepare an updated Master Plan that codifies a time table for Port growth, pollution reduction, land use, business and management practices and new technology development and correlate new individual projects to the updated Master Plan to assess the comprehensive impacts caused by Port projects.	No	No	Yes, not recommended as Project mitigation as a Port Master Plan update is underway.
LU-8	**Port Master Greening Plan** – Port to develop a master greening plan, including the planting of trees, shrubs, and flowers to re-oxygenate the air in nearby communities.	Yes, the project will emit air pollutants.	No	Yes, at a Portwide level. The proposed Project also includes landscaping.
LU-1	**Moratorium on Port Growth** – Sponsor a public conference to discuss and consider adopting a moratorium on Port growth. Hire an independent consultant to assess the feasibility of the moratorium and local public opinion.	Yes, the proposed Project will have impacts related to terminal development and operation.	No, this measure is a feasibility study rather than an actual moratorium.	No, not a Project-level measure.
SPECIFIC PROJECTS				
LU-6	**Restoration Plan** – Require the Port to sponsor a public conference to discuss and consider the possibility of developing a San Pedro Restoration Plan.	No	No, this measure is a conference rather than implementation of a plan.	No, as impacts are not anticipated.
LU-12	**Community Parks and Gardens** – Require the Port to designate land for community parks and botanical gardens within the Harbor communities.	No	No	No, as impacts are not anticipated.

Noise Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: INCREASED NOISE				
N-1a	**Community Noise Soundproofing –** Require the Port to prepare a Community Noise Soundproofing Plan.	Yes	Yes	No, noise impacts would be limited and temporary and reduced through direct mitigation.
N-1b	Fund the sound proofing of all residences, schools, businesses, parks, rest homes, hospitals, etc, in the LA Harbor area.	Yes, some significant noise impacts to limited residences.	Yes	No, as noise impacts would not affect the entire LA Harbor area.
N-3	Sound proof sensitive noise receptors.	Yes, during construction.	Yes	Yes, noise barriers included as Project mitigation (MM Noise-3).
N-2	**Noise Barriers** – Place 8-foot noise barriers in areas where trains border residential areas to mitigate excessive noise.	No	No	No, as rail noise impacts are not anticipated.
	Require that vehicles and equipment be equipped with adequate mufflers and noise baffles	Yes	Yes	Yes, included as a Deep Draft FEIS/FEIR mitigation and applicable to the Project (MM 4H-1).

Recreation Measures

	Subcommittee Recommendation:	CEQA Criteria for Mitigation Measures: Does the Project have a significant physical impact in this area?	Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?	Is the measure feasible in terms of technology and/or cost? (if not, why?)
IMPACT: REDUCED RECREATIONAL FACILITIES				
A-24	**Wilmington Youth Sailing Center –** This proposal calls for the construction and establishment of a Wilmington Youth Sailing Center at the Consolidated Slip within the Port of Los Angeles in the community of Wilmington. The Center is intended to serve primarily low-income and at-risk harbor area youth, ages 8-18, by providing after school and weekend recreational activities; maritime education, including boat and water safety, navigation aids and rules and acquainting youth with career opportunities in the maritime industry.	No	No	No, as no such impacts are anticipated.
A-30	**Cabrillo Lagoon and Recreational Area –** The proposed Project encompasses Port land located between 22nd Street, Miner and Crescent Avenues. The Project proposes removing the last remaining warehouses on the property and creating the Cabrillo Lagoon, a sailing center, a fishing research and maritime study center.	No	No	No, as no such impacts are anticipated.
A-38	**Los Angeles Maritime Museum –** Improve the Los Angeles Maritime Museum located in San Pedro by creating an educational experience for its visitors by installing new, interactive exhibits pertaining to the history of the harbor area. Such improvements include a 25-foot topographical map detailing the changes in the harbor's landscape.	No	No	No, as no such impacts are anticipated. See attached PCAC Aesthetic Mitigation Section
A-39	**Twin Brigantine Tall Ships –** TopSail Youth Program's Twin Brigantine tall ship construction project. The TopSail Youth Program of the Los Angeles Maritime Institute, located in San Pedro, provides for participants to become familiar with crewmates and the vessel and its dynamics through the real work needed to sail a large vessel.	No	No	No, as no such impacts are anticipated.
A-49	**Baseball Facilities and Programs –** Improvements to the Harbor Community Development Corp. baseball facility, maintenance of a year round athletic program, and an expanded tutoring program.	No	No	No, as no such impacts are anticipated.

Hazards Measures				
	Subcommittee Recommendation:	**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: INCREASED HAZARD RISK				
	SAFETY PLANS			
H-1	**Evacuation Plans** – Develop full evacuation plans for the surrounding communities that identify routes and measures to facilitate evacuation	No	No	No, as no impact is anticipated.
H-3	**Risk Analysis –** Risk analysis for the Vincent Thomas Bridge which accounts for the possibility of an explosion beneath the bridge in the backland area and determines the level of damage that could be caused to the bridge and the community.	No	No	No, as location of Pier 400 does not necessitate transit under the the Vincent Thomas Bridge.
H-4a	**Port Risk Management Report** – Re-evaluate the Port Risk Management Report for safety issues, considering that a portion of the China Shipping facility is located in the "blast zone" for the Kinder Morgan Energy Partners LPG facility.	Yes, due to the environmental consequence associated with the risk of a tanker oil spill resulting from an attack.	No	Yes, however, the facilities cited are not applicable for this project.
H-7	**Emergency Response** – Provide additional emergency response equipment or infrastructure in order to achieve acceptable response times.	No	No	No, as no impact is anticipated.
	HAZARDOUS WASTE			
H-2	**Hazardous Waste Management Plan –** Port to prepare a Construction Hazardous Waste Management Plan, including methods to eliminate or limit the use of high VOC and toxic chemical products. The plan should also address the proper handling and disposal of those items which contaminate soil, groundwater, and surface water.	No	No	No, as no impact is anticipated.
	BUFFER AREAS/PORT PLANNING			
H-4b	**LPG Facility –** Relocate the LPG facility to Pier 400 to avoid safety and hazard impacts.	No	No	No, as no impact is anticipated. The project will not influence LPG facilities.
H-5	**Buffer Areas** – Excluding trucks and containers from up to a 300-foot area at the base of the bridge must be considered.	No	No	No, as no impact is anticipated.
H-6	**Exclusion Area** – Consider a 300-foot exclusion area for ships in Port similar to that included in plans for new cruise ship dock.	No	No	No, as no impact is anticipated.
A-16	**Reduce Backland** – Scale back the 35-acre backland creation to allow for tall ship/small vessel traffic and emergency evacuation.	No	No	No, as no impact is anticipated.

Utilities and Services				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: ENERGY CONSUMPTION				
A-4	**Energy Conservation –** Consultant to help energy conservation measures "Turn off some of the lights."	No	No	Terminal control, administration and security buildings will be built to LEED standards and will incorporate energy saving designs/measures.
IMPACT: INCREASED HAZARDS TO SAFETY				
T-7	**Ticket Trucks –** Increase money to Port Police and LAPD monitors to ticket illegally parked trucks and those using routes not designated for trucks.	No	No	Not proposed as mitigation specific to this Project as no impact is anticipated, therefore no Project nexus. However, the Port has recently hired officers dedicated to truck traffic and parking in local communities.
T-16	**Additional Police –** Require the Port to hire additional Port police to protect the harbor community.	No	No	Not recommended as Project mitigation as no impact is anticipated. However, the Port has recently hired new officers.

Water Quality Measures				
Subcommittee Recommendation:		**CEQA Criteria for Mitigation Measures**		
		Does the Project have a significant physical impact in this area?	**Does the measure directly avoid, reduce, eliminate and/or rectify the specific impact?**	**Is the measure feasible in terms of technology and/or cost? (if not, why?)**
IMPACT: WATER QUALITY DEGRADATION				
WQ-1a	**Recycle Rainwater** – Establish a Port watershed rainwater capture plan to prevent polluted runoff from entering Port waters	No	Not Applicable	No, as no such impact is anticipated.
WQ-1b	Recycle rainwater for landscaping or other uses (could also mitigate utility impact)	No	No	No, as utility impacts would not be significant.
WQ-2	**Lagoon** – Replace loss of water views with a lagoon.	No	No	No, as no such impact is anticipated.