TRANSMITTAL 4

Pacific L.A. Marine Terminal LLC Crude Oil Terminal Final SEIS/SEIR Mitigation Measures

Air Quality: Construction

MM AQ-1: Ridesharing or Shuttle Service

Ridesharing or shuttle service programs shall be provided for construction workers.

MM-AQ-2: Staging Areas and Parking Lots

On-site construction equipment staging areas and construction worker parking lots shall be located on either paved surfaces, or unpaved surfaces covered by gravel or subjected to soil stabilization treatments. The staging areas and worker parking lots shall be located as close as possible to public access routes. Access to public roadways from the staging areas and parking lots shall be controlled in order to minimize idling of Project construction equipment.

MM AQ-3: Fleet Modernization for Construction Equipment.

Prior to December 31, 2011: All on-site mobile diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels shall meet the Tier 2 emission standards as defined in the USEPA Non-Road Diesel Engine Rule (USEPA 1998) prior to December 31, 2011. In addition, all construction equipment greater than 50 hp shall be retrofitted with a CARB-certified Level 3 diesel emissions control device.

From January 1, 2012 to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-3 emission off-road emission standards, at a minimum and shall be retrofitted with a CARB certified Level 3 diesel emissions control device.

From January 1, 2015 on: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 emission off-road emission standards, at a minimum and shall be retrofitted with a CARB certified Level 3 diesel emissions control device.

MM AQ-4: Electricity Use

Electricity supplied by a public utility shall be used where available on the tank farm and pier construction sites in lieu of temporary diesel or gasoline-powered generators.

MM AQ-5: Best Management Practices

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

1. Use of diesel oxidation catalysts and catalyzed diesel particulate traps
2. Maintain equipment according to manufacturers' specifications
3. Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of 5 minutes when not in use
4. Install high-pressure fuel injectors on construction equipment vehicles

5. Maintain a minimum buffer zone of 300 meters between truck traffic and sensitive receptors
6. Improve traffic flow by signal synchronization
7. Enforce truck parking restrictions
8. Provide on-site services to minimize truck traffic in or near residential areas, including, but not limited to, the following services: meal or cafeteria services, automated teller machines, etc.
9. Re-route construction trucks away from congested streets or sensitive receptor areas
10. Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.

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

MM AQ-6: Additional Fugitive Dust Controls

The construction contractor shall reduce fugitive dust emissions by 90 percent from uncontrolled levels1. The Project construction contractor shall specify dust-control methods that will achieve this control level in a SCAQMD Rule 403 dust control plan. Their duties shall include holiday and weekend periods when work may not be in progress.

- Measures to reduce fugitive dust include, but are not limited to, the following:
- Active grading sites shall be watered one additional time per day beyond that required by Rule 403.
- Contractors shall apply approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas inactive for ten days or more.
- Construction contractors shall provide temporary wind fencing around sites being graded or cleared.
- Trucks hauling dirt, sand, or gravel shall be covered in accordance with Section 23114 of the California Vehicle Code.
- Construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site. Pave road and road shoulders.
- Require the use of clean-fueled sweepers pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to the site to reduce fugitive dust emissions.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM_{10} generation.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.

1 Fugitive dust emissions will be reduced 75 percent from uncontrolled emissions and then an additional 60 percent from unmitigated emissions.

- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.
- Require the use of electrified truck spaces for all truck parking or queuing areas.

The grading contractor shall suspend all soil disturbance activity when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas shall be stabilized if construction is delayed.

MM AQ-7: Expanded VSR Program

All ships and barges used primarily to deliver construction-related materials to a LAHD-contractor construction site shall comply with the expanded Vessel Speed Reduction (VSR) Program of 12 knots from 40 nautical miles (nm) from Point Fermin to the Precautionary Area.

MM AQ-8: Low Sulfur Fuel for Construction Delivery Vessels

All ships and barges used primarily to deliver construction-related materials to a LAHD-contractor construction site shall use low-sulfur fuel (maximum sulfur content of 0.2 percent) in main engines, auxiliary engines, and boilers within 40 nm of Point Fermin.

MM AQ-9: Engine Standards for Harbor Craft Used in Construction

Prior to December 31, 2010, all harbor craft with C1 or C2 marine engines must achieve a minimum emission reduction equivalent to a U.S. Environmental Protection Agency (USEPA) Tier-2 2004 level off-road marine engine. From January 1, 2011 on, all harbor craft with C1 or C2 marine engines must utilize a USEPA Tier-3 engine, or cleaner.

MM AQ-10: Fleet Modernization for On-Road Trucks

- **Prior to and including December 31, 2011:** All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on-site or to transport materials to and from the site shall comply with USEPA 2004 on road emission standards for PM_{10} and NO_x (0.10 g/bhp-hr PM_{10} and 2.0 g/bhp-hr NO_x.
- **From January 1, 2012 on:** All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Port of Los Angeles shall comply with EPA 2007 on-road emission standards for PM10 and NOx (0.01 g/bhp-hr and 0.20 g/bhp-hr).
- **All years**: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on-site or to transport materials to and from the site shall comply with USEPA 2004 on road emission standards for PM_{10} and NO_x (0.10 g/bhp-hr PM_{10} and 2.0 g/bhp-hr NO_x. Trucks hauling materials such as debris or fill shall be fully covered while in operation off Port property.

MM AQ-11: Special Precautions near Sensitive Sites

For construction activities that occur within 1,000 feet of sensitive receptors (defined as schools, playgrounds, daycares, and hospitals), the Port shall notify each of these sites in writing at least 30 days before construction activities begin.

MM AQ-12 General Mitigation Measure

For any of the above mitigation measures (MM AQ-1 through AQ-11), if a CARB-certified technology becomes available and is shown to be as good as or better in terms of emissions performance than the existing measure, the technology could replace the existing measure pending approval by the Port.

Deep Draft FEIS/FEIR MM 4G-5: Discontinue construction activities during a Stage II Smog Alert.

MM AQ-22: **LEED.**

The main terminal building shall obtain the Leadership in Energy and Environmental Design (LEED) gold certification level. LEED certification is made at one of the following four levels, in ascending order of environmental sustainability: certified, silver, gold, and platinum. The certification level is determined on a point-scoring basis, where various points are given for design features that address the following areas (U.S. Green Building Council, 2005):

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation & Design Process

As a result, a LEED-certified building will be more energy efficient, thereby reducing GHG emissions compared to a conventional building design.

MM AQ-23: Compact Fluorescent Light Bulbs

All interior terminal building lighting shall use compact fluorescent light bulbs and the tenant shall maintain and replace all compact fluorescent bulbs.

MM AQ-25: Solar Panels

The applicant shall install solar panels on the administration building.

MM AQ-27: Tree Planting

The applicant shall plant shade trees around the administration building. All shade trees shall be maintained over the life of the project.

Air Quality and Meteorology: Operation

MM AQ-13: Expanded Vessel Speed Reduction (VSR) Program

All ships calling (100%) at Berth 408 shall comply with the expanded VSR Program of 12 knots between 40 nm from Point Fermin and the Precautionary Area from Year 1 of operation.

MM AQ-14: Low Sulfur Fuel Use in Main Engines, Auxiliary Engines, and Boilers

All ships (100%) calling at Berth 408 shall use 0.2% low sulfur fuel within 40 nm of Point Fermin on their outbound leg and while hotelling at the Project, beginning on day one of operation. Vessels calling at Berth 408 shall also use 0.2% low sulfur fuel within 40 nm of Point Fermin on their inbound leg, except where circumstances (such as ships with a mono-tank system or ships originating from a Port where low sulfur fuel is not available) make such use infeasible on the inbound leg. Regardless, the applicant shall adhere to the following annual phase-in schedule which identifies the minimum allowable annual percentage of vessels in the fleet calling at Berth 408 which shall use 0.2% low sulfur fuel within 40 nm of Point Fermin on their inbound leg:

	Main Engines/Auxiliary Engines/Boilers					
	Inbound			*Hoteling and Outbound*		
Year	**HFO**	**0.50%**	**0.20%**	**HFO**	**0.50%**	**0.20%**
1	0	100	0	0	0	100
2	0	100	0	0	0	100
3	0	100	0	0	0	100
4	0	80	20	0	0	100
5	0	50	50	0	0	100
6	0	50	50	0	0	100
7-30	0	10	90	0	0	100

In addition, all callers carrying 0.2% low sulfur shall use 0.2% low sulfur within 40 nm of Point Fermin both on the inbound and outbound leg. Six months prior to operation of Berth 408 the applicant shall lead the effort, with Port support, in notifying all fuel suppliers/shippers of the low sulfur fuel requirements. This notification shall be achieved through publication of a notice in Bunker World (or other similar fuel supply trade publication) and by notification to all Berth 408 customers.

MM AQ-15: AMP

By the end of year 2 of operation, all ships capable of utilizing AMP and all frequent callers (2 or more a year) shall use AMP at the facility. At a minimum, ships calling at the Berth 408 facility shall use AMP while hoteling at the Port in the following minimum percentages:

- By end of year 2 of operation – 6 (4%) vessel calls
- By end of year 3 of operation – 10% of annual vessel calls
- By end of year 5 of operation – 15% of annual vessel calls
- By end of year 10 of operation – 50% of annual vessel calls

- By end of year 16 of operation – 80% of annual vessel calls

MM AQ-16: Slide Valves

Ships calling at Berth 408 shall be equipped with slide valves or a slide valve equivalent (an engine retrofit device designed to reduce the sac volume in fuel valves of main engines in Category 3 marine engines) on main engines to the maximum extent possible

MM AQ-17: Parking Configuration

Configure parking during operation to minimize traffic interference. Because the effectiveness of this measure cannot be predicted, it is not quantified in this study. This measure incorporates the requirements of MM 4G-14 from the 1992 Deep Draft FEIS/FEIR

MM AQ-18: New Vessel Builds

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

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

MM AQ-23: Compact Fluorescent Light Bulbs

All interior terminal building lighting shall use compact fluorescent light bulbs. Fluorescent light bulbs produce less waste heat and use substantially less electricity than incandescent light bulbs.

MM AQ-24: Energy Audit

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

MM AQ-26: Recycling

The terminal buildings shall achieve a minimum of 40 percent recycling by 2012 and 60 percent recycling

by 2015. Recycled materials shall include:

- White and colored paper
- Post-it notes
- Magazines
- Newspaper
- File folders
- All envelopes including those with plastic windows
- All cardboard boxes and cartons
- All metal and aluminum cans
- Glass bottles and jars
- All plastic bottles

Air Quality Lease Measures

MM AQ-19: Equivalent Measures/General Mitigation Measure

For any of the above mitigation measures (MM AQ-13 through AQ-18), if any kind of technology becomes available and is shown to be as good or as better in terms of emissions reduction performance than the existing measure, the technology could replace the existing measure pending approval by the Port of Los Angeles. The technology's emissions reductions must be verifiable through USEPA, CARB, or other reputable certification and/or demonstration studies to the Port's satisfaction. This measure is intended to provide PLAMT the flexibility to achieve required emissions mitigation using alternative methods that may not be apparent at present.

The applicant may use an AMP alternative emission reduction technology so long as the alternative technology will achieve emission reductions equivalent to the emission reductions that would have been achieved through the use of AMP.

MM AQ-20: Periodic Review of New Technology and Regulations

The Port shall require the tenant to review, in terms of feasibility, any Port-identified or other new emissions-reduction technology, and report to the Port. Such technology feasibility reviews shall take place at the time of the Port's consideration of any lease amendment or facility modification. If the technology is determined by the Port to be feasible in terms of cost, technical and operational feasibility, the tenant shall work with the Port to implement such technology at sole cost to the tenant.

Potential technologies that may further reduce emission and/or result in cost-savings benefits for the tenant may be identified through future work on the CAAP. Over the course of the lease, the tenant and the Port shall work together to identify potential new technology. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility. The effectiveness of this measure depends on the advancement of new technologies and the outcome of future feasibility or pilot studies. If the tenant requests future Project changes that would require environmental clearance and a lease amendment, future CAAP mitigation measures would be incorporated into the new lease at that time.

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.

In addition, the Port shall require the tenant to evaluate the application of a AMECs or similar stack control technology within 5 years of project approval and implement such technology, pending separate CEQA analysis, if found to be feasible

MM AQ-21: Throughput Tracking

If the project exceeds project throughput assumptions / projections anticipated through the years 2010, 2015, 2025, or 2040, staff shall evaluate the effects of this on the emission sources (ship calls and crude oil throughput) relative to the SEIS/SEIR. If it is determined that these emission sources exceed SEIS/SEIR assumptions, staff would evaluate actual air emissions for comparison with the SEIS/SEIR and if the criteria pollutant emissions exceed those in the SEIS/SEIR, then new or additional mitigations would be applied through MM AQ-20.

Biology: Construction

MM BIO 1.1a

A qualified least tern biologist hired by the Port shall monitor the California least tern and other special status bird nesting during construction activities on Pier 400, including installation of Pipeline Segment 1 to Tank Farm Site 2 and use of staging area 412. Monitoring shall occur from 2 weeks prior to the nesting season start (April) to the end of the nesting season (September or when the last bird has vacated the site and no birds return for at least two weeks). Monitoring shall occur at a minimum of three days a week during the nesting season, which, for the least terns, generally extends from mid-May through the beginning of August In the event of an imminent threat to nesting special status species, and the Construction Manager is not immediately available, the monitor shall have the authority to redirect construction activities. If construction activities need to be redirected to prevent impacts to special status birds, the monitor shall immediately contact the LAHD Environmental Management Division, Port Inspector, and Construction Manager. The Construction Manager has the authority to halt construction if determined to be necessary.

MM BIO 1.1b

At Tank Farm Site 1, no stone column construction shall occur at night (sunset to sunrise), and if possible, stone column construction during daytime hours should be conducted outside the least tern nesting season. If stone column installation is unavoidable during the nesting season, the work shall be phased so that installation nearest the nesting site is conducted prior to or after the nesting season, and a qualified biologist shall monitor the least terns at the nesting site during stone column installation to identify adverse reactions of the birds to this activity. If the terns react adversely to work at any of these sites, work will be temporarily stopped. The LAHD Environmental Management Division, least tern biologist, and Construction Manager shall confer with the USFWS and CDFG regarding necessary further actions.

MM BIO 1.1c

All construction activities that are within 200 ft (61 m) of the California least tern nesting site and foraging areas shall be scheduled to occur between September and March, unless otherwise approved by the USFWS and CDFG. This includes installation and removal of mooring piles as well as gravel delivery

at staging area 412.

MM BIO 1.1d

The Port shall provide environmental training by a qualified biologist to all construction contractor personnel working at the site. This shall include, but not be limited to, information about the California least tern (e.g., seasonal presence, pictures of the birds, and regulatory protections) and other special status species (e.g., black skimmer and burrowing owl) and measures required to avoid or minimize the potential for impacts to these species. The latter measures shall include placement of food in sealed containers and daily disposal of all food wastes in sealed containers, with off-site disposal at regular intervals during construction; prohibition of pets or animals of any kind during work on Pier 400; limiting activities within 200 ft (61m), or other established buffer distance, of the nesting site from March through August, to the extent feasible; and scheduling construction activities that would be near the nesting site for the period between September and March.

MM BIO 1.1e

When California least terns are present at the nesting site, idle construction equipment and stockpiles of materials exceeding approximately 8 ft (2.4 m) in height shall be placed so they do not provide perches for birds that could prey on least terns.

MM BIO 1.1f

Night time construction at Tank Farm Site 1 and construction staging area 412 during the least tern nesting season should be avoided. All lighting (temporary and security) shall be directed away from the California least tern nesting site and shielded to minimize increased light in the nesting area.

MM BIO 1.1g

Vegetation growing at Tank Farm Site 1 shall be cleared immediately prior to construction activities occurring from April through August to discourage and protect least terns and black skimmers from nesting within the work area. Areas cleared at other times of the year will not be left barren and vacant during the nesting season.

MM BIO 1.1h

To avoid impacts to nesting special status species, such as the California least tern, black skimmer, and burrowing owl, a preconstruction survey shall be conducted by a qualified biologist if construction commences during the normal nesting season for most bird species (February 1 to August 1) to determine if any are nesting there.

If any nesting is found, a buffer area of 200 ft (61 m) shall be established and protective measures shall be finalized in coordination with USFWS and CDFG (and the USACE for federally listed species). If any nesting is found, an initial buffer area of 200 ft (61 m) shall be established, and the biological monitor would work with the LAHD Environmental Management Division (EMD) and their CLT consultant, Port Inspector, and Construction Manager to ensure protection of the least terns while nesting. As appropriate, the USACE, USFWS, and CDFG would be consulted regarding the safe distance setback requirements. Nesting birds shall be protected until nesting is complete or young have fledged as determined by a qualified biologist

MM BIO 1.1i

During construction, no unauthorized vehicles or persons shall be allowed within 200 ft (61 m) of the east side and northeast corner of the least tern nesting site (the "at grade portion") during the nesting season. Signs shall be posted, and barriers (e.g., temporary fencing) shall be provided if signage is not adequate.

MM BIO 1.1j

Construction of the north-south oriented containment dikes at Tank Farm Site 1 should occur early in site development to aid as noise buffers during construction.

MM BIO 1.1k

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

In addition, a qualified biologist shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port's Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 100 meters of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance.

MM BIO 1.2a

The portions of all structures (buildings, lights, etc.) at the proposed Tank Farm Site 1 on Pier 400 that have a direct line of sight to the least tern nesting site shall be designed to prevent birds from perching on them. The prevention measures cannot be specified at this time but shall be those approved by the USFWS at the time of installation (e.g., Nixalite currently used on high mast lights) and shall be monitored during the least tern nesting season to verify that predatory birds are not perching on proposed Project structures and to identify repairs needed to keep the measures in good working order. Any such repairs will be implemented immediately (i.e., within one day when least terns are present).

Biology: Operation

MM BIO-1.2b: Predator Control

A qualified biologist shall monitor Tank Farm Site 1 for predators during the least tern nesting season. Any predators found will be controlled in coordination with CDFG and USFWS.

MM BIO-1.2c: Oil Spill Containment

If a project-related oil spill occurs during the least tern nesting season and has the potential to enter the Pier 300 Shallow Water Habitat, booms shall be deployed to prevent oil from entering this important foraging area. The applicant shall ensure quick deployment of oil booms at the south entrance of the Pier 300 Shallow Water Habitat or at the causeway gap bridge, either through storage of booms at the south

entrance to the Pier 300 Shallow Water Habitat and at the causeway gap bridge or through deployment at these locations in accordance with the approved oil spill response plan.

MM BIO-1.2d: Security Lighting

Security lighting standards on the eastern side of Tank Farm Site 1 near the least tern nesting site shall be no greater than 30 ft (9.1 m) in height and directed away from the nesting site.

MM BIO-1.2e: Operations Personnel Environmental Training

The Port shall provide environmental training by a qualified biologist to all operational workers at the PLAMT Pier 400 Marine Terminal and Tank Farm Site 1. This shall include, but not be limited to, information about the California least tern (e.g., seasonal presence, pictures of the birds, and regulatory protections) and measures required to avoid or minimize the potential for adverse effects to the species. The latter measure shall include placement of food in sealed containers and daily disposal of all food wastes in sealed containers, with off-site disposal at regular intervals; prohibition on bringing pets or animals of any kind to work on Pier 400; and scheduling significant maintenance/construction activities that would occur near the nesting site for the period between September and March.

MM BIO-1.2f: Vessel Speed Reduction Program

All ships calling (100 percent) at Berth 408 shall comply with the expanded VSR Program of 12 knots between 40 nm from Point Fermin and the Precautionary Area from Year 1 of operation.

Cultural Resources

MM CR-1a.

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

If human remains are encountered, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains. The Los Angeles County Coroner shall be contacted to determine the age and cause of death of the deceased. If the remains are not of Native American heritage, construction in the area may recommence. If the remains are of Native American origin, the most likely descendants of the deceased shall be identified by the NAHC. The Port and USACE shall consult with the Native American most likely descendant(s) to identify a mutually acceptable strategy for treating and disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. If the NAHC is unable to identify a most likely descendant, the descendant fails to make a recommendation within 24 hours of being notified by the

NAHC, the Port, or the USACE and the descendant are not capable of reaching a mutually acceptable strategy through mediation by the NAHC, the Native American human remains and associated grave goods shall be reburied with appropriate dignity on the proposed Project site in a location not subject to further subsurface disturbance.

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

Geological Resources

MM 4A-4: Seismic Design

The proposed terminal facilities would have the potential to experience severe seismically induced ground accelerations. Damage or injury shall be minimized through the appropriate seismic engineering design, based upon a site-specific geotechnical investigation.

MM 4A-6: Minimization of Settlement

The proposed terminal facilities would have the potential to experience soil settlement as a result of construction on hydraulically-placed landfill material. Damage or injury shall be minimized through the appropriate structural design, based upon a site-specific geotechnical investigation.

MM GEO-1: Emergency Response Planning

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

Groundwater and Soils: Construction

MM GW-1: Site Remediation

Unless otherwise authorized by the lead regulatory agency for any given site, the LAHD shall remediate all contaminated soils or contamination within the excavation zones on the Project site boundaries prior to or during subsurface construction activities. Remediation shall also include suspected or known contamination within boundaries of the proposed Project that occurred as a result of leaks or spills on adjacent properties. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the Los Angeles Fire Department, DTSC, and/or LARWQCB.

Soil remediation shall be completed such that contamination levels in subsurface excavations are below health screening levels established by OEHHA and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Only clean soil would be used as backfill. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) in backland areas and/or risk-based soil assessments but would be subject to the discretion of the lead regulatory agency.

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

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

MM GW-2: Soil, Slurry, and Groundwater Characterization in Areas of Known Contamination

The following sampling plan shall be implemented to address areas of known soil contamination during grading, trenching, HDD, and dewatering activities:

a. Excavated soil in areas of known contamination shall be systematically tested for contaminants, including but not limited to those listed in Table 3.7-1, for each project area.

b. HDD drilling waste shall be systematically tested for contaminants, and if present, segregated from clean soils and slurry.

c. The remedial option(s) of contaminated material shall be dependent upon a number of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis.

d. On-site personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place.

e. Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of soil/slurry sampling, remediation, and/or disposal. All excavations shall be filled with structurally suitable fill material which contains contaminant concentrations (if any) that are within permissible limits, as directed by the Los Angeles Fire Department, DTSC, and/or LARWQCB.

f. All excavations shall be filled with structurally suitable fill material which contains contaminant concentrations (if any) that are within permissible limits, as directed by the Los Angeles Fire Department, DTSC, and/or LARWQCB.

g. Any project-related dewatering activities shall either discharge into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or comply with the NPDES permit regulations and an associated SWPPP regarding discharge into storm drains and/or directly into harbor waters. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Effluent analyses should include, but not be limited to, contaminants summarized in Table 3.7-1. Alternatively, the water shall be temporarily stored onsite in holding tanks, pending off-site disposal at a disposal facility approved by the LARWQCB. An NPDES-mandated SWPPP shall include measures ensuring that potential pollutant-contaminated waters encountered during excavation would be isolated and collected for transportation to a hazardous waste treatment facility prior to their discharge into the storm drain system.

MM GW-3: Contamination Contingency Plan

The following contingency plan shall be implemented to address unknown contamination during grading, trenching, HDD, and dewatering activities:

a. All grading, trench excavation and filling operations, HDD, and dewatering operations shall be observed for the presence of free-phase petroleum products, chemicals, or contaminated soil/groundwater. Discolored soil or suspected contaminated soil shall be segregated from clean soil. In the event unexpected, contaminated soil or groundwater is encountered during construction, the contractor shall notify the Los Angeles Harbor Department's Chief Harbor Engineer, Director of Environmental Management, and Risk Management's Industrial Hygienist. The Port shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material(s) identified within the boundaries of the construction area. Continued work at a contaminated site shall require the approval of the Chief Harbor Engineer.

b. A photoionization detector (or other organic vapor detecting device) shall be present during grading, excavation, and HDD through suspected chemically impacted soil.

c. Excavation of VOC-impacted soil will require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.

d. The extent of removal actions shall be determined on a site-specific basis. At a minimum, the chemically impacted area(s) within the boundary of the tank farm construction area or pipeline trench shall be remediated to the satisfaction of the lead regulatory agency for the site. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.

e. HDD drilling waste shall similarly be monitored for contaminants, and if present, segregated from clean soils and slurry. Contaminated slurry shall be containerized, dewatered, and dried, pending remediation or off-site disposal. Contaminated groundwater, derived from the slurry dewatering process, shall be trucked off-site and disposed at a California **licensed disposal** facility.

f. The remedial option(s) of contaminated material shall be dependent upon a number of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both off-site and on-site remedial options shall be evaluated.

g. Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of project completion.

h. In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that “general site workers” shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place.

i. In cases where potential chemically impacted soil is encountered, a real-time aerosol monitor shall be placed on the prevailing downwind side of the impacted soil area to monitor for airborne particulate emissions during soil excavation and handling activities.

j. All excavations shall be filled with structurally suitable fill material which contains contaminant concentrations (if any) that are within permissible limits, as directed by the Los Angeles Fire Department, DTSC, and/or LARWQCB. k) Any project-related dewatering activities shall either discharge into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or comply with the NPDES permit regulations and an associated SWPPP regarding discharge into storm drains and/or directly into harbor waters. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Alternatively, the water shall be temporarily stored onsite in holding tanks, pending off-site disposal at a disposal facility approved by the LARWQCB. An NPDES-mandated SWPPP shall include measures ensuring that potential pollutant-contaminated waters encountered during excavation would be isolated and collected for transportation to a hazardous waste treatment facility prior to their discharge into the storm drain system.

MM GW-4: Aquifer Cross-Contamination Prevention

The following aquifer cross-contamination prevention measures shall be implemented to address HDD related operations:

a. Additional assessment of the hydrologic conditions of the semi-perched aquifer, Bellflower Aquiclude, and Gage Aquifer shall be performed in areas where cross-contamination could occur as a result of HDD operations.

b. An HDD plan shall be developed and implemented to prevent the introduction of contaminated groundwater from the semi-perched aquifer into deeper aquifers along the HDD routes.

MM GW-5: Frac-Out Prevention

The following frac-out prevention measures shall be implemented to address construction related frac-outs:

a. A preliminary, site-specific, geotechnical investigation shall be completed in areas proposed for HDD.

b. A frac-out contingency plan shall be completed, including measures for prevention, containment, clean up, and disposal of released drilling muds that might occur either on the ground surface or into harbor waters.

Noise: Construction

MM 4H-1: Use of Proper Construction Equipment to Reduce Noise

The construction contractors shall utilize the quietest equipment available, and all internal combustion powered equipment shall be equipped with properly operating mufflers and kept in tune to avoid backfires. In addition, engines, if exposed, are to be fitted with protective shrouds to reduce motor noise.

MM 4H-2: Reduce Use of Portable Generators

Where feasible, electricity shall be obtained from the local power grid to avoid the use of portable generators.

MM 4H-3: Coordinate Reponses to Noise Complaints

Provide for designation of a disturbance coordinator for responding to noise complaints, with his/her name and telephone number to be clearly posted at the construction site

MM NOISE-1: Noise Reduction during Pile Driving

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

In addition, a qualified biologist shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port's Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 100 meters of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance.

MM NOISE-2: Restricted Hours for Pile Driving

Pile driving to be limited to between 9 AM and 5 PM, Monday through Friday and from 10 AM to 4 PM on Saturdays.

MM NOISE-3: Temporary Noise Attenuation Barriers

Construction equipment that will be stationary for extended periods (pipeline boring machinery, compressors, generators, etc.) can be shielded by erection of temporary noise attenuation barriers. The barriers should be installed directly between the equipment and the nearest noise sensitive use to the construction site. The need for and feasibility of noise attenuation barriers should be evaluated on a case-by-case basis considering the distance to noise sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations. Noise attenuation barriers suitable for pile driving equipment should be considered using the same criteria.

Standard Controls, in Accordance with the 1992 Deep Draft Final EIS/EIR Mitigation Measures

A. Construction would be limited to the hours of 7:00 a.m. to 6:00 p.m. on weekdays, between 8:00 a.m. and 6:00 p.m. on Saturdays, and construction equipment noise would be prohibited anytime on Sundays and holidays

B. Noise-generating construction activities would not be conducted on weekends or holidays.

C. All construction equipment powered by internal combustion engines would be properly muffled and maintained.

D. Unnecessary idling of internal combustion engines near noise-sensitive areas would be prohibited.

E. All stationary noise-generating construction equipment, such as air compressors and portable power generators, would be located as far as practical from existing noise-sensitive land uses.

F. Quiet construction equipment would be selected, whenever possible. Noise limits for construction equipment established in the City of Los Angeles Noise Ordinance would be met, where feasible.

G. Residents adjacent to the proposed Project sites would be notified, in writing, of the construction schedule.

Transportation and Circulation: Construction

MM 4F-1: Encourage Carpooling

The contractor shall encourage construction workers to carpool by offering various incentives.

MM 4F-2: Efficient Use of Truck Trips

When possible, trucks that are utilized to bring equipment and materials to the site shall be used to carry off any debris, excess materials, etc.

MM 4F-4: Ridesharing, Parking Management, Auto Use/Truck Movement Restriction

Tenants shall be encouraged to reduce the number of vehicle trips associated with employee vehicles by introducing ridesharing incentives, parking management programs (i.e., parking spaces to ride sharers and removing street parking), auto use restriction program, and truck movement restriction program..

MM 4F-5: Literature on VMT Reduction and Rideshare

On-site information on the importance of the reduction in vehicle miles traveled (vmt) and related air quality impacts shall be provided and programs shall be dispensed.

MM TRANS-1: Outbound Construction Worker Routing

Outbound westbound construction workers from TCY 421 and TCY 408 would be directed to leave these yards by traveling northbound on Ferry Street, then access SR-47 westbound via the Ferry Street/SR-47 ramp interchange. Outbound eastbound construction workers would be directed to leave TCY 421 and TCY 408 by traveling southbound on Ferry Street, following Ferry Street as it turns into Terminal Way heading northeast, turn left on Navy Way, and then turn right at the Navy Way/Seaside Avenue intersection.

Recreation: Construction

MM 4K-4: Boating Safety Measures

During In-Water Construction Requires LAHD to coordinate public notifications with yacht clubs; buoy and mark construction zones; and add boating safety measures such as increased harbor patrols in the construction areas.

Risk of Upset and Hazardous Materials: Construction

MM 4I-2: Clean Coastal Waters Cooperative. Facility operator handling hazardous liquid in bulk at proposed Project sites shall be a member of the Marine Spill Response Corporation (MSRC) cooperative, or equivalent Oil Spill Response Organization (OSRO) approved by the U.S. Coast Guard.

MM 4I-3: Onshore Oil Spill Containment. The overland pipeline transportation corridor shall be

designed so that spills along the corridor would be contained and not allowed to run off into the water.

MM 4I-4: Built-In Fire Protection Measures. Facilities handling crude oil or petroleum products shall have built-in fire protection measures that satisfy the requirements outlined in the applicable Fire Codes (see Appendix E under "Fire Prevention, Detection, and Suppression System").

MM 4I-5: Use of Seawater for Fire Protection. Besides fresh water supplied to the facilities, the proposed Project facilities shall also be equipped to use seawater for fire protection.

MM RISK-2.1a: Double-Hulled Vessels. The proposed Project shall limit crude oil deliveries to double-hulled vessels.

MM RISK-2.1b: Quick-Release Couplings

Loading arms shall be equipped with USCG-approved quick-release couplings. A crude oil flow control system shall be interlocked at the coupling that will automatically stop flow prior to disconnection.

MM RISK-2.1c: Oil Spill and Eelgrass Habitat

If there is an oil spill event in the marine environment, an assessment of eelgrass habitat will be conducted by a qualified biologist and appropriate coordination will be undertaken with NMFS to ensure appropriate mitigation consistent with the Southern California Eelgrass Mitigation Policy.

Utilities and Public Services

MM 4N-1: Incorporate Water Conservation into Project Design

Water conservation devices and systems shall be incorporated into the proposed Project designs, including those required by the State of California Department of Water Resources. These include the following:

Any landscape plans shall emphasize a planting scheme that minimizes water irrigation requirements and shall use drought-resistant, native vegetation.

The proposed Project shall pursue the use of reclaimed water from the Terminal Island Treatment Plant for use in terminal operations.

The use of seawater for fire suppression shall be investigated.

MM PS-1: Recycling of Construction Materials

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

MM PS-2: Materials with Recycled Content

Materials with recycled content shall be used in project construction. Chippers on site during construction shall be used to further reduce excess wood for landscaping cover.

MM PS-3: Solid Waste Integrated Resources Plan Compliance

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

Water Quality

MM 4B-7: Increase Local Staffing of CDFG OSR Personnel. Requires that the Port petition the state for increased local staffing of the OSPR to reduce the level of accidental spills at ship fuel docks.

MM WQ-1.2: Cleanup of Floating Materials Retained by Containment Boom. All vessels at Berth 408 shall be surrounded by a spill containment boom prior to initiating unloading operations. Following unloading and before releasing the boom, the project tenant shall visually inspect the water surface or the area encircled by the containment boom and recover and dispose any floating materials (e.g., trash) or petroleum sheen.

Modifications to or Additional Mitigation Measures in the Final SEIR

The following mitigation measures were either added to or modified in the Final SEIR. New text is denoted by underlining while deleted text is denoted by ~~strikethrough~~.

MM AQ-3: Construction Equipment

Prior to December 31, 2011: All on-site mobile diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels shall meet the Tier 2 emission standards as defined in the USEPA Non-Road Diesel Engine Rule (USEPA 1998) prior to December 31, 2011. In addition, all construction equipment greater than 50 hp shall be retrofitted with a CARB-certified Level 3 diesel emissions control device.

From January 1, 2012 to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-3 emission off-road emission standards, at a minimum and shall be retrofitted with a CARB certified Level 3 diesel emissions control device.

From January 1, 2015 on: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 emission off-road emission standards, at a minimum and shall be retrofitted with a CARB certified Level 3 diesel emissions control device.

MM AQ-5: Best Management Practices (BMPs)

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

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

LAHD shall implement a process by which to select additional BMPs to further reduce air emissions during construction. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list. ~~The LAHD shall implement a process to add BMPs to reduce air emissions from all LAHD-sponsored construction projects. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list and project scope. The LAHD shall then meet with the contractor to identify potential BMPs and work with the contractor to include such measures in the contract. BMPs shall be based on Best Available Control Technology (BACT) guidelines and may also include changes to construction practices and design to reduce or eliminate environmental impacts.~~

MM AQ-6: Additional Fugitive Dust Controls

The construction contractor shall reduce fugitive dust emissions by 90 percent from uncontrolled levels. The Project construction contractor shall specify dust-control methods that will achieve this control level in a SCAQMD Rule 403 dust control plan. Their duties shall include holiday and weekend periods when work may not be in progress.

Measures to reduce fugitive dust include, but are not limited to, the following:

- Active grading sites shall be watered one additional time per day beyond that required by Rule 403.
- Contractors shall apply approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas) inactive for ten days or more.
- Construction contractors shall provide temporary wind fencing around sites being graded or cleared.
- Trucks hauling dirt, sand, or gravel shall be covered ~~or shall maintain at least 2 feet of freeboard~~ in accordance with Section 23114 of the California Vehicle Code.
- Construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site.
- Pave road and road shoulders.
- Require the use of clean-fueled sweepers pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to the site to reduce fugitive dust emissions.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM_{10} generation.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.

MM AQ-10: Fleet Modernization for On-Road Trucks –

Prior to and including December 31, 2011: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on-site or to transport materials to and from the site shall comply with USEPA 2004 on road emission standards for PM_{10} and NO_x (0.10 g/bhp-hr PM_{10} and 2.0 g/bhp-hr NO_x).

From January 1, 2012 on: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Port of Los Angeles shall comply with EPA 2007 on-road emission standards for PM_{10} and NO_x (0.01 g/bhp-hr and 0.20 g/bhp-hr).

All years: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on-site or to transport materials to and from the site shall comply with USEPA 2004 on road emission standards for PM_{10} and NO_x (0.10 g/bhp-hr PM_{10} and 2.0 g/bhp-hr NO_x).

Trucks hauling materials such as debris or fill shall be fully covered while in operation off Port property. ~~The construction contractor shall be exempt from the above harbor craft requirements and on-road truck requirements if he provides proof that any of following circumstances exist:~~

- ~~A piece of specialized equipment is unavailable in a controlled form within the state of California, including through a leasing agreement.~~
- ~~A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the project, but the application process is not yet approved, or the application has been approved, but funds are not yet available.~~
- ~~A contractor has ordered a control device for a piece of equipment planned for use on the project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the project has the controlled equipment available for lease.~~

~~The effectiveness of this measure was determined by assuming that the mitigated construction truck fleet was 50 percent 2007 SCAB average fleet and 50 percent compliant with the year 2007 standards. Use of the EMFAC2007 emission factor model determined that the emission reductions associated with this mitigation measure would range from 9 to 15 percent, depending upon the pollutant. Because SO_x emissions are proportional to the fuel sulfur content, no appreciable change would occur in SO_x emissions.~~

MM AQ-14: Low Sulfur Fuel

All ships (100%) calling at Berth 408 shall use 0.2% low sulfur fuel within 40 nm of Point Fermin on their outbound leg and while hotelling at the Project, beginning on day one of operation. Vessels calling at Berth 408 shall also use 0.2% low sulfur fuel within 40 nm of Point Fermin on their inbound leg, except where circumstances (such as ships with a mono-tank system or ships originating from a Port where low sulfur fuel is not available) make such use infeasible on the inbound leg. Regardless, the applicant shall adhere to the following annual phase-in schedule which identifies the minimum allowable annual percentage of vessels in the fleet calling at Berth 408 which shall use 0.2% low sulfur fuel within 40 nm of Point Fermin on their inbound leg. ~~Ships calling at Berth 408 shall use low-sulfur fuel in main engines, auxiliary engines, and boilers within 40 nm of Point Fermin (including hoteling for non-AMP ships) in the annual percentages in fuel requirements as specified below~~:

PLAMT Fuel Switch for Main Engines, Auxiliary Engines, and Boilers

	Main Engines/Auxiliary Engines/Boilers					
	Inbound			*Hoteling and Outbound*		
Year	**HFO**	**0.50%**	**0.20%**	**HFO**	**0.50%**	**0.20%**
1	0	100	0	0	0	100
2	0	100	0	0	0	100
3	0	100	0	0	0	100
4	0	80	20	0	0	100
5	0	50	50	0	0	100
6	0	50	50	0	0	100
7-30	0	10	90	0	0	100

~~In addition, all callers carrying 0.2% low sulfur shall use 0.2% low sulfur fuel within 40 nm of Point Fermin both on the inbound and outbound leg~~. Six months prior to operation of Berth 408 the applicant shall lead the effort, with Port support, in notifying all fuel suppliers/shippers of the low sulfur fuel requirements. This notification shall be achieved through publication of a notice in Bunker World (or other similar fuel supply trade publication) and by notification to all Berth 408 customers.

MM AQ-15 AMP

By end of year 2 of operation, all ships capable of utilizing AMP and all frequent callers (2 or more a year), shall use AMP at the facility. At minimum, ships calling at the Berth 408 facility shall use AMP ~~Ships calling at Berth 408 facility shall use AMP while hoteling at the Port in the following at minimum percentages~~ while hoteling at the Port in the following at minimum percentages:

- By end of year 2 of operation – 6 (4%) vessel calls
- By end of year 3 of operation – 10% of annual vessel calls
- By end of year 5 of operation – 15% of annual vessel calls
- By end of year 10 of operation – ~~40~~ 50% of annual vessel calls
- By end of year 16 of operation – ~~70~~ 80% of annual vessel calls

MM AQ-20: Periodic Review of New Technology and Regulations

The Port shall require the tenant to review, in terms of feasibility, any Port-identified or other new emissions-reduction technology, and report to the Port. Such technology feasibility reviews shall take place at the time of the Port's consideration of any lease amendment or facility modification. If the technology is determined by the Port to be feasible in terms of cost, technical and operational feasibility, the tenant shall work with the Port to implement such technology at sole cost to the tenant.

Potential technologies that may further reduce emission and/or result in cost-savings benefits for the tenant may be identified through future work on the CAAP. Over the course of the lease, the tenant and the Port shall work together to identify potential new technology. Such technology shall be studied for feasibility, in terms of cost, technical and operational feasibility. The effectiveness of this measure depends on the advancement of new technologies and the outcome of future feasibility or pilot studies. If the tenant requests future Project changes that would require environmental clearance and a lease amendment, future CAAP mitigation measures would be incorporated into the new lease at that time.

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.

In addition, the Port shall require the tenant to evaluate the application of a AMECs or similar stack control technology within 5 years of project approval and implement such technology, pending separate CEQA analysis, if found to be feasible.

MM BIO-1.1a: Monitor the California least tern and Other Bird Nesting.

A qualified least tern biologist hired by the Port shall monitor least tern and other special status bird nesting during construction activities on Pier 400, including installation of Pipeline Segment 1 to Tank Farm Site 2 and use of staging area 412. Monitoring shall occur from 2 weeks prior to the nesting season start (April) to the end of the nesting season (September or when the last bird has vacated the site and no birds return for at least two weeks). Monitoring shall occur at a minimum of three days a week during the nesting season, which generally extends from mid-May through the beginning of August. ~~that would occur from April through August~~.

In the event of an imminent threat to nesting special status species and the Construction Manager is not immediately available, the monitor shall have the authority to redirect construction activities. If construction activities need to be redirected to prevent impacts to special status birds, the monitor shall immediately contact the LAHD Environmental Management Division, Port Inspector, and Construction Manager. The Construction Manager has the authority to halt construction if determined to be necessary.

MM BIO-1.1k: Noise Reduction during Pile Driving

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

In addition, a qualified biologist hired by the Port shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port's Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 100 meters of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance.

MM BIO-1.1i: Protection of California least tern nesting

During construction, no unauthorized vehicles or persons shall be allowed within 200 ft (61 m) ~~100 ft (30m)~~ of the east side and northeast corner of the least tern nesting site (the "at grade portion") during the nesting season. Signs shall be posted, and barriers (e.g., temporary fencing) shall be provided if signage is not adequate.

MM BIO-1.1h: Protection of Special Status Species

To avoid impacts to nesting special status species, such as the California least tern, black skimmer, and burrowing owl, a preconstruction survey shall be conducted by a qualified biologist

if construction commences during the normal nesting season for most bird species (February 1 to August 1) to determine if any are nesting there.

If any nesting is found, a buffer area of 200 ft (61 m) shall be established and protective measures shall be finalized in coordination with USFWS and CDFG (and the USACE for federally listed species). If any nesting is found, an initial buffer area of 200 ft (61 m) shall be established, and the biological monitor would work with the LAHD Environmental Management Division (EMD) and their CLT consultant, Port Inspector, and Construction Manager to ensure protection of the least terns while nesting. As appropriate, the USACE, USFWS, and CDFG would be consulted regarding the safe distance setback requirements. Nesting birds shall be protected until nesting is complete or young have fledged as determined by a qualified biologist. ~~Nesting birds shall be protected until nesting is complete or young have fledged as determined by a qualified biologist.~~

MM CR-1a: Historical Resources

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

If human remains are encountered, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains. The Los Angeles County Coroner shall be contacted to determine the age and cause of death of the deceased. If the remains are not of Native American heritage, construction in the area may recommence. If the remains are of Native American origin, the most likely descendants of the deceased shall be identified by the NAHC. The Port and USACE shall consult with the Native American most likely descendant(s) to identify a mutually acceptable strategy for treating and disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. If the NAHC is unable to identify a most likely descendant, the descendant fails to make a recommendation within 24 hours of being notified by the NAHC, the Port, or the USACE and the descendant are not capable of reaching a mutually acceptable strategy through mediation by the NAHC, the Native American human remains and associated grave goods shall be reburied with appropriate dignity on the proposed Project site in a location not subject to further subsurface disturbance.

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

Mitigation Measure (MM) GW-1: Site Remediation. Unless otherwise authorized by the lead regulatory agency for any given site, the LAHD shall remediate all contaminated soils or contamination within the excavation zones on the Project site boundaries prior to or during subsurface construction activities. Remediation shall also include suspected or known contamination within boundaries of the proposed Project that occurred as a result of leaks or spills on adjacent properties. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the Los Angeles Fire Department, DTSC, and/or LARWQCB.

Soil remediation shall be completed such that contamination levels in subsurface excavations are below health screening levels established by OEHHA and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Only clean soil would be used as backfill. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) in backland areas and/or risk-based soil assessments but would be subject to the discretion of the lead regulatory agency.

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

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

MM NOISE-1: ~~Selection of Contractor For Pile Driving With Consideration of Noise Reduction~~. Noise Reduction during Pile Driving

~~The selection of the contractor for pile driving would include consideration of the pile drivers to be employed, sound abatement techniques to be used, and the predicted resulting sound pressure levels produced for the different types and sizes of piles to be placed~~. The contractor shall be required to use sound abatement techniques to reduce both noise and vibrations from pile driving activities. Sound abatement techniques shall include, but are not limited to, vibration or hydraulic insertion techniques, drilled or augured holes for cast-in-place piles, bubble curtain technology, and sound aprons where feasible. At the initiation of each pile driving event, the pile driving shall also employ a "soft-start" in which the hammer is operated at less than full capacity (i.e., approximately 40–60% energy levels) with no less than a 1-minute interval between each strike for a 5-minute period.

In addition, a qualified biologist shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port's Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 100 meters of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance.

MM RISK-2.1c: Oil Spill and Eelgrass Habitat

If there is an oil spill event in the marine environment, an assessment of eelgrass habitat will be conducted by a qualified biologist and appropriate coordination will be undertaken with NMFS to ensure appropriate mitigation consistent with the Southern California Eelgrass Mitigation Policy.