



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

August 20, 2008

Dr. Spencer D. MacNeil  
U.S. Army Corps of Engineers  
Los Angeles District  
Attn: Regulatory Division  
P.O. Box 532711  
Los Angeles, California 90053-2325

Subject: Draft Supplemental Environmental Impact Statement (DSEIS) for the Pacific L.A.  
Marine Terminal LLC Pier 400, Berth 408 Project (Project) in the Port of Los Angeles,  
California (CEQ # 20080217)

Dear Dr. MacNeil:

The U.S. Environmental Protection Agency (EPA) has reviewed the above project pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. These comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines (Guidelines) promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA). Our detailed comments are enclosed.

We appreciate having met with you and Port of Los Angeles (Port) staff on July 15<sup>th</sup> to discuss and visit this and other Port projects. We also appreciate having had the opportunity to coordinate with you and Port staff on our preliminary comments on the Project. Based on review of the SDEIS and our discussions, we have rated the document EC-2, Environmental Concerns – Insufficient Information. While the document is very well done, and substantial mitigation

USEPA-1

USEPA-1 ↑ efforts have been identified, we remain concerned with significant and unavoidable impacts to air quality, environmental justice communities, and aquatic and biological resources.

USEPA-2 EPA commends the Corps and Port for the implementation of a high quality Health Risk Assessment to identify cancer and non-cancer health risks in the Port area as a result of the Project. We consider this an example analysis for other federal agencies to refer to. We remain concerned with the cumulative impacts to the already health burdened community and recommend the Port and Corps commit in the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) to implementing measures that will reduce cancer risks as described in the DEIS. We are also concerned with unmitigated impacts to air quality in the South Coast Air Basin from construction and operations, and recommend the Ports and Corps commit in the FEIS and ROD to implementing mitigation measures that go beyond the San Pedro Bay Ports Clean Air Action Plan (CAAP). We suggest additional measures to reduce emissions, including shore-side electric pumps for transferring crude oil from ships, use of Tier 3 emission standards for construction equipment, and capture of additional vessel boiler flue gasses. Conformity with the 1997/1999 South Coast State Implementation Plan should also be clarified.

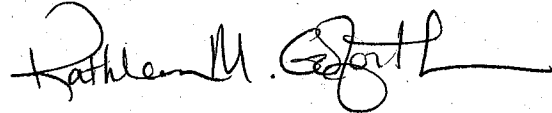
USEPA-3 We also recognize the efforts of the Port and Corps to assess and disclose impacts to the Environmental Justice (EJ) community adjacent to the Project. However, we remain concerned over the significant and unavoidable impacts to the already disproportionately affected EJ community, and recommend additional measures to fully offset these impacts. We suggest the Corps and Port develop a Health Impact Assessment to better identify these impacts and work with the community to identify offset measures. In addition to health impacts from construction and operational emissions, we are also concerned with potential impacts from construction noise resulting from the Project.

USEPA-4 The Project would include fill as part of the construction of a new wharf and associated pilings to accommodate oil tankers at Berth 408. The Port and Corps do not consider the pilings to be fill, but recognize that rock placed at the base of pilings would be fill. No mitigation is discussed for the placement of fill and conversion of soft bottom habitat in the outer San Pedro Bay Harbor. EPA is concerned with the lack of justification for not considering the pilings to be fill, and the lack of mitigation for conversion of soft bottom habitat. We also suggest the Port consider additional water quality protection measures at proposed tank farms and at over-water pipeline crossings. A mitigation program to fund water quality and aquatic habitat cleanup and restoration is also recommended in order to mitigate for oil spills in the Harbor vicinity.

USEPA-5 The Port and Corps have identified vessel strikes to whales and other marine mammals as a significant but unavoidable impact, and EPA remains concerned that additional mitigations beyond the Vessel Speed Reduction Program are not provided. We recommend the Port work with the Port of Long Beach to develop a port-wide vessel strike reduction program, similar to the one under development at Cape Cod Bay, to better identify whales through audible detection. We also recommend the Port and Corps relocate the proposed Tank Farm 1 and use the undeveloped land to expand the existing California least tern preserve that is described in the SDEIS as significant to this species' local and state-wide populations.

We appreciate the opportunity to review this SDEIS and look forward to continued coordination with the Corps and the Port. When it is published, please send a copy of the FEIS to the address above (Mail Code: CED-2). If you have any questions, please contact the lead reviewer for this project Paul Amato or me. Paul can be reached at 415-972-3847 or [amato.paul@epa.gov](mailto:amato.paul@epa.gov); I can be reached at 415-972-3521 or [goforth.kathleen@epa.gov](mailto:goforth.kathleen@epa.gov).

Sincerely,



Kathleen M. Goforth, Manager  
Environmental Review Office

Enclosures: Summary of EPA Rating System  
EPA's Detailed Comments

cc: Dr. Ralph Appy, Director, Environmental Management Division, Port of LA;  
Ms. Lena Maun-DeSantis, Marine Environmental Supervisor, Port of LA;  
Ms. Cindy Tuck, Assistant Undersecretary, California Environmental Protection Agency;  
Ms. Cynthia Marvin, Assistant Division Chief for Planning and Technical Support,  
California Air Resources Board;  
Ms. Susan Nakamura, South Coast Air Quality Management District;  
Mr. Hassan Ikrhata, Executive Director, Southern California Association of  
Governments;  
Dr. Paul Simon, Director, Division of Chronic Disease & Injury Prevention, Los Angeles  
County Department of Health;  
Mr. Bryant Chesney, NOAA Fisheries;  
Mr. Ken Corey, U.S. Fish & Wildlife Service;  
Mr. Bill Paznokas, California Department of Fish & Game

# SUMMARY OF EPA RATING DEFINITIONS

USEPA-1  
(Part)

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

## ENVIRONMENTAL IMPACT OF THE ACTION

### *LO" (Lack of Objections)*

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

### *"EC" (Environmental Concerns)*

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

### *EO" (Environmental Objections)*

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

### *"EU" (Environmentally Unsatisfactory)*

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

## ADEQUACY OF THE IMPACT STATEMENT

### *Category 1" (Adequate)*

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

### *"Category 2" (Insufficient Information)*

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

### *"Category 3" (Inadequate)*

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

### Air Comments

***Commit in the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) to fully implement mitigations that will reduce cancer risks.*** Similar to our July 21, 2008 comments on the Port of Los Angeles (Port) China Shipping Project Recirculated Draft Environmental Impact Statement, EPA commends the efforts of the Port and Corps to conduct a high quality health risk assessment (HRA) for toxic air contaminants (TACs) emitted from all alternatives assessed in the Supplemental Draft Environmental Impact Statement (SDEIS). We consider this HRA to serve as an excellent example of the level of analysis that should be conducted for projects of this scale, and will encourage other federal agencies to refer to it in developing HRAs to assess health impacts and appropriate mitigations for their projects.

USEPA-7

While the cumulative impacts to air quality in the Port region should be considered significant, we also recognize the mitigation efforts that have reduced additional risks of cancer, and both acute and chronic non-cancer health impacts.

EPA continues to have concerns with any increases in cancer risks and both chronic and acute non-cancer health impacts that may result from Project emissions, while acknowledging the level of effort of the Port and Corps to assess these risks and mitigate them through the San Pedro Bay Ports Clean Air Action Plan (CAAP). We also understand that project-specific CAAP mitigation measures will be enforceable through lease agreements between the Port and the terminal operator Plains All American Pipeline, L.P. For questions regarding air quality issues, please contact Francisco Donez, EPA Air Division, in our Los Angeles Office at (213) 244-1834, or by email at [donez.francisco@epa.gov](mailto:donez.francisco@epa.gov).

#### *Recommendation:*

The Port and Corps should commit, in the FEIS and the ROD, that CAAP mitigation measures necessary to reduce cancer risk and both acute and chronic non-cancer health impacts will be fully implemented, as described in the HRA. This should include a commitment to implement additional mitigations if CAAP implementation measures are delayed or insufficient to meet cancer risk and health impact reduction targets.

***Commit in the FEIS and ROD to implement, in a timely manner, mitigation measures that exceed CAAP emission reductions.*** EPA is concerned about the significant and unavoidable impacts of construction and operational air emissions associated with the Proposed Project, even after mitigation measures have been taken into account. The SDEIS includes a very thorough air quality analysis and description of the mitigation measures that will be implemented to reduce the significant adverse air impacts identified in the SDEIS. However, even with implementation of these aggressive mitigation measures, the SDEIS states that Proposed Project peak daily emissions from construction of phase 1 would have direct and cumulative air quality impacts, exceeding peak daily South Coast Ambient Air Quality District (SCAQMD) emission thresholds for volatile organic compounds (VOC), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter greater than 2.5 and 10 microns (PM<sub>10</sub> and PM<sub>2.5</sub>) (pp. 3.2-51 & 4-41). Proposed Project construction would also result in direct and cumulative air quality impacts to offsite ambient air pollutant concentrations, exceeding SCAQMD thresholds of significance for 1-hour and annual nitrogen dioxide (NO<sub>2</sub>) and 24-hour PM<sub>10</sub> and PM<sub>2.5</sub> (pp. 3.2-53 & 4-42).

USEPA-8



USEPA-8

While we acknowledge the reported operational air quality benefits of a terminal that accommodates fewer very large crude container (VLCC) vessels, as opposed to relying on increased numbers of smaller vessels (also called "lightering"), we remain concerned with direct and cumulative operational impacts of the Proposed Project to air quality, exceeding SCAQMD peak daily CO emission thresholds (Table 3.2-25, p. 4-43) and offsite ambient NO<sub>2</sub> concentrations (pp. 3.2-71 & 4-44).

Given the severe air quality problems within the project area, all feasible measures should be implemented to reduce and mitigate air quality impacts to the greatest extent possible. This is especially important for the South Coast Air Basin (SCAB) nonattainment criteria pollutants ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, as well as CO, for which the Basin is designated attainment/maintenance. The SDEIS states that Project air quality mitigation measures are consistent with the CAAP and, in some cases, exceed the emission reduction strategies of the CAAP (p. 3.2-26). However, changes to the CAAP measures may occur, such as specific implementation dates, compliance rates, and other requirements. The Port and Corps should ensure that CAAP measures and additional mitigation measures that go beyond the CAAP are implemented on a schedule that will reduce construction and operational emissions to the maximum extent feasible.

*Recommendations:*

All proposed mitigation measures in the SDEIS should be included in the FEIS and the ROD. We recommend implementation of the mitigation measures prior to or, at a minimum, concurrent with the construction of phase 1 of the Project.

The ROD should demonstrate how measures beyond the CAAP meet or exceed current CAAP emissions requirements. EPA recommends that the ROD ensure that mitigation measures that exceed the CAAP emissions reductions continue to do so despite potential future changes to the CAAP measures.

USEPA-9

***Consider shore-side electric pumps that would transfer crude oil from vessels to Tank Farm 1.*** Shore-side electric pumps would be used to transfer crude oil from Tank Farm 1 to Tank Farm 2 as a measure to reduce emissions from a vessel's diesel powered boilers. According to the document, the vessel's boilers would still be required to pump crude oil from the ship to Tank Farm 1, and could be in operation for up to a day at a time (p. 2-13). To further reduce emissions from vessels at the proposed terminal, EPA requests a discussion of the feasibility of installing shore-side electric pumps with enough power to pull crude from the vessel to Tank Farm 1 in addition to pumping from Tank Farm 1 to Tank Farm 2.

*Recommendation:*

The FIES should discuss the feasibility of using shore-side electric pumps to transfer crude oil from ships to Tank Farm 1. If this is feasible, the Corps and Port should commit to this additional measure in the FEIS and ROD.

USEPA-10

***Use equipment meeting Tier 3 engine standards and commit to the best available emissions control technology.*** Mitigation Measure AQ-3: Construction Equipment Standards commits to meeting Tier 2 emission standards and California Air Resources Board (CARB)-certified Level 3 diesel emissions control devices for construction equipment diesel engines greater than 50 horse

power. Tier 3 engine standards will be available in the 2008-model year and should be used for Project construction equipment to the maximum extent feasible. Lacking availability of non-road construction equipment that meets Tier 3 engine standards, the Corps and Port should commit to using the best available emissions control technologies on all equipment.

USEPA-10

*Recommendation:*

The Corps and Port should commit in the FEIS and ROD to using construction equipment meeting Tier 3 engine standards, to the maximum extent feasible, and to using the best available emissions control technologies on all equipment.

***Commit to capturing the remaining 65 percent of vessel boiler flue gasses.*** The document describes the capture of 35 percent of vessel boiler flue gasses in the vessel tank headspace (p. 3.2-37). The remaining 65 percent would be released to the atmosphere. These releases have been accounted for in the Project emissions inventory and would have a negative impact on air quality. EPA encourages the Port to implement mitigation measures, such as the Advanced Maritime Emission Control System (AMECS) technology, to capture these emissions in an effort to improve air quality.

USEPA-11

*Recommendation:*

The Corps and Port should commit in the FEIS and ROD to capturing the remaining 65 percent of the vessel boiler flue gasses using AMECS or other best available emissions control technology.

***Correct or clarify CO emissions from construction.*** In Table 3.2-11, pre-mitigation peak daily CO emissions from construction are 2,195 lbs/day. This is lower than post-mitigation peak daily CO emissions of 2,541 lbs/day in Table 3.2-50. This appears to be an error.

USEPA-12

*Recommendation:*

The FEIS should clarify or correct peak daily construction emission totals for CO in Tables 3.2-11 and/or 3.2-50.

**General Conformity**

***Demonstrate general conformity with the South Coast State Implementation Plan (SIP).*** A complete analysis is required to determine if the emissions associated with the Federal action (both construction and operational emissions) are subject to the requirements of a formal conformity determination under the General Conformity rule codified at 40 CFR 93, subpart B. The “applicability” analysis involves quantification of emissions caused by a Federal action that are generated within nonattainment or maintenance areas, that are reasonably foreseeable, and that the Federal agency can practicably control and will maintain control over, due to a continuing program responsibility. A formal conformity determination is required for all such emissions that exceed de minimis thresholds set forth in the rule.

USEPA-13

The discussion in the SDEIS regarding whether the Project meets the applicable general conformity requirements does not demonstrate that the emissions associated with the Federal Action are explicitly accounted for in the 1997/1999 SIP. For questions regarding general

USEPA-13

conformity, please contact John Kelly, EPA Air Division, at (415) 947-4151, or by email at [kelly.johnj@epa.gov](mailto:kelly.johnj@epa.gov).

*Recommendation:*

EPA recommends that the FEIS clarify consistency with the 1997/1999 South Coast SIP. The FEIS should demonstrate whether the emissions associated with the Federal Action are specifically accounted for in the 1997/1999 South Coast SIP.

USEPA-14

**Environmental Justice**

Overall, the Environmental Justice (EJ) analysis in Chapter 5 is well done. EPA acknowledges the efforts of the Port and Corps to analyze impacts on the EJ community, and we will use the analysis as an example for other federal agencies to use in preparing their environmental justice analyses. Specifically, the following parts of the EJ analysis were particularly well thought out:

- Consideration of the high cost of living in Southern California and the factoring of that into the low-income calculations (p. 5-3);
- Figures 5-1 and 5-2. These maps are very clear and easy to interpret;
- Section 5.3 on Applicable Regulations is very thorough and provides good context for the rest of the chapter.
- Section 5.4.1 clearly explains the methodology to be used.
- Interpreting “meaningfully greater” to mean simply “greater” which provides for a conservative analysis (p. 5-19);
- Section 5.4.2 summarizes the public comments that have been received, and is a very important part of this Chapter.
- Section 5.4.2.1 and Section 5.4.2.2 are very thorough in that they discuss and address every resource with a clear discussion on whether there are environmental justice impacts or not.
- Table 5-3 presents a clear, relatively easy to understand, summary of the environmental justice impacts.

USEPA-15

The above strengths notwithstanding, the section lacks appropriate mitigations to fully offset the adverse project related impacts to the local community. The Environmental Justice Chapter of the Draft EIS concludes that there will be disproportionately high and adverse effects on minority and low-income populations due to air quality, noise, recreation and risk of upset. The local community is already heavily impacted, a condition which could be exacerbated by the many projects currently planned at and around the Port. In addition, we note that Wilmington and East San Pedro are designated as Health Professional Shortage Areas.<sup>1</sup> Therefore, all impacts, even seemingly small impacts, are important to consider and mitigate in order to fully offset the adverse project related impacts to the local community.

As stated in Section 5.3.2, the Council on Environmental Quality states that the identification of disproportionately high and adverse human health or environmental effects on a low-income or minority population does not preclude a proposed agency action from going forward nor compel

<sup>1</sup> <http://hpsafind.hrsa.gov/HPSASearch.aspx>



a finding that a proposed project is environmentally unacceptable. Instead, the identification of such effects is expected to encourage agency consideration of alternatives, mitigation measures, and preferences expressed by the affected community or population.

USEPA-15

The SDEIS does not propose any measures to mitigate significant and unavoidable impacts identified in Chapter 5. Considering the magnitude of potential cumulative health impacts related to the Project and the CEQ guidance to encourage agency consideration of mitigation measures and preference of the local community, EPA has developed potential measures for mitigating the impacts to the local community. For further coordination on EJ issues, please contact Steven John, Director of the Los Angeles Office at (213) 244-1804, or by email at [john.steven@epa.gov](mailto:john.steven@epa.gov).

***The Port and Corps should conduct a port-wide health impact assessment (HIA).*** There is a growing body of evidence that environmental justice communities are more vulnerable to pollution impacts than are other communities.<sup>2</sup> As discussed in EPA's *Framework for Cumulative Risk*<sup>3</sup> and the *National Environmental Justice Advisory Council's Ensuring Risk Reduction in Communities with Multiple Stressors: Environmental Justice and Cumulative Risks/Impacts*<sup>4</sup>, disadvantaged, underserved, and overburdened communities are likely to come to the table with pre-existing deficits of both a physical and social nature that make the effects of environmental pollution more, and in some cases, unacceptably, burdensome. Thus, certain subpopulations may be more likely to be adversely affected by a given stressor than is the general population.

USEPA-16

Low-income and minority communities are potentially experiencing more health impacts than would be predicted using traditional risk assessments. An HIA is a potential tool for examining this complex issue. HIAs look at health holistically, considering not only bio-physical health effects, but also broader social, economic, and environmental influences. HIAs also explicitly focus on health benefits and the distribution of health impacts within a population. HIAs strive to anticipate potential impacts for decision-makers and to deliver a set of concrete recommendations targeted at minimizing health risks and maximizing benefits.<sup>5</sup>

A helpful resource for examples of HIAs is the Dannenberg et al (2008)<sup>6</sup> study that examined 27 case studies of Health Impact Assessment in the US, with six HIAs in California and Alaska

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<sup>2</sup> O'Neill M, Jerrett M, Kawachi I, Levy J, Cohen AJ, Gouveia N, Wilkinson P, Fletcher T, Cifuentes L, Schwartz J.. Health, Wealth, and Air Pollution: Advancing Theory and Methods. *Environmental Health Perspectives*. Vol 111, No 16, December 2003. This article evaluated 15 different studies of particulate air pollution and socioeconomic conditions and found the majority of the studies evaluating individual-level characteristics did show effect modification with higher health impacts (such as mortality or asthma hospitalizations) among those with lower socioeconomic position. Low educational attainment seemed to be a particularly consistent indicator of vulnerability in these studies.

<sup>3</sup> Available at: <http://cfpub.epa.gov/ncea/raf/recordisplay.cfm?deid=54944>

<sup>4</sup> Available at: <http://www.epa.gov/environmentaljustice/nejac/past-nejac-meet.html>

<sup>5</sup> Bhatia, Rajiv and Wernham, Aaron. Integrating Human Health into Environmental Impact Assessment: An Unrealized Opportunity for Environmental Health and Justice. *Environmental Health Perspectives*. Available online April 16, 2008.

<sup>6</sup> Dannenberg, A, Bhatia R, Cole B, Heaton S, Feldman J, Rutt, C. Use of Health Impact Assessment in the US. 27 Case Studies, 1999-2007. *American Journal of Preventive Medicine*. 2008; 34(3).

USEPA-16

conducted in conjunction with environmental impacts assessment processes. The study includes eleven HIA analyses in California. Most of the HIAs evaluated included recommendations to mitigate predicted adverse health impacts of the proposed policy or project and/or to increase predicted health-promoting components of the proposal.

*Recommendation:*

We recommend the Ports and Corps consider development of a port-wide health impact assessment (HIA). Given the magnitude and complexity of potential health impacts related to Port projects, EPA recommends the Corps and Port partner with the local health department and the local community to conduct a HIA which encompasses this project and all upcoming Corps/Port projects. An additional resource that provides information about Health Impact Assessments is the following Center for Disease Control and Prevention (CDC) website: <http://www.cdc.gov/healthyplaces/hia.htm>.

USEPA-17

***Provide additional mitigations to fully offset impacts to the environmental justice community.***

The Port should use both information from an HIA and continued input from the local community on mitigation measures that would help fully offset port-related health impacts. The Los Angeles Environmental Justice (LAEJ) Network is an example of a forum that the Port could engage to solicit input on priority mitigation measures. In addition, many groups impacted by ports and goods movement came together in late 2007 at Moving Forward, the first North American community-oriented gathering on this topic, which was organized by The Impact Project and cosponsored by private groups along with National Institute of Environmental Health Scientists and the EPA-funded Children's Environmental Health Sciences Center. The Corps and Port should contact the conference organizers to see if potential mitigation measures were discussed at this conference and whether they would be appropriate for this project.

Furthermore, the Corps and Port should contact those involved with the mitigation trust fund associated with the expansion of the Tra Pac Terminal Expansion Project to get their input on appropriate mitigation measures. Finally, some of the recommendations of the Port Community Advisory Committee (PCAC) such as the recommendation for a Public Health Trust Fund, Health Survey, Partners for Kids Health (mobile clinic) and the Health and Environmental Directory should be considered as potential environmental justice mitigations.

EPA is available to participate as a partner with the community, the Port, and the Corps to assist in the identification of mitigation measures to reduce the impacts on the affected communities for this and future projects. For further coordination on EPA involvement with the EJ community, please contact Steven John, Director of the Los Angeles Office at (213) 244-1804, or by email at [john.steven@epa.gov](mailto:john.steven@epa.gov).

*Recommendation:*

The Port and Corps should consider and work with communities to further develop the following mitigation measures to more fully offset health impacts of the Project to the already burdened community in the Project area:

- Engage in proactive efforts to hire local residents and train them to do work associated with the construction and long term operations at the facility in order to improve economic status and access to healthcare;

- Provide public education programs about environmental health impacts and land use planning issues associated with the Port to better enable local residents to make informed decisions about their health and community;
- Ensure enforcement of anti-idling requirements;
- Establish Environmental Management Systems at the Port to improve efficiency and reduce environmental impacts from operations;
- Improve access to healthy food through establishment of farmer's markets or retail outlets on Port lands;
- Continue expansion and improvements to the local community's parks and recreation system in order to provide increased access to open space and exercise opportunities. EPA supports increased parks and open space, but strongly encourages the Port to implement emission reduction measures as soon as possible to prevent increased health risk from greater exposure opportunities.

USEPA-17

### **Fill of Water of the U.S.**

USEPA-18

***Mitigate for placement of fill and conversion of soft bottom Outer Harbor habitat.*** The Draft Section 404(b)(1) Alternatives Analysis in Appendix Q states that the 150 or 258 wharf pilings (depending on the final design) would not be considered fill because they are not close enough to each other to have the effect of fill. The Corps and Port should clarify in the FEIS why the pilings do not meet the description of fill materials consistent with 33 CFR 323, "Handbook on Dredging". Rock fill at the base of the pilings is, however, considered to constitute 0.1 acre of fill, but mitigation is not described in the DEIS. This appears to be inconsistent with the Port of LA China Shipping Project that proposed to mitigate for placement of rock fill on soft bottom habitat in the Inner Harbor, with credits from the Port's Bolsa Chica mitigation site. We also note that the placement of pilings and rock will convert higher quality Outer Harbor soft bottom habitat, and shade from the new wharf may degrade aquatic habitat. For questions regarding Clean Water Act compliance and other issues related to fill, please contact Jorine Campopiano, EPA Water Division, in our Los Angeles Office at (213) 244-1808, or by email at [campopiano.jorine@epa.gov](mailto:campopiano.jorine@epa.gov).

***Recommendation:***

The FEIS should clarify why the pilings are not considered fill, consistent with 33 CFR 323, and commit to providing adequate mitigation for conversion of Outer Harbor soft bottom habitat resulting from the placement of rock and pilings for wharf construction. The Port and Corps should also consider mitigation for impacts to aquatic resources resulting from shade beneath the proposed wharf.

### **Water Quality**

USEPA-19

***Provide additional secondary containment for tank farms.*** The DEIS describes the secondary containment dikes that would surround the tank farms (p. 2-24). The dikes would contain the volume of the largest volume tank plus the estimated rainfall of the 24-hour, 25-year rainfall event. This capacity appears to be adequate to contain an unlikely event but may not be adequate under catastrophic conditions.

USEPA-19

*Recommendation:*

Additional capacity should be considered in order to more adequately contain an oil spill in the event of a catastrophic event. This may be achievable through raising the elevation or increasing the perimeter of the containment dike, and should be discussed further in the FEIS.

USEPA-20

**Consider additional pipeline mainline block valves at bridge crossings.** According to the DEIS, remotely operated mainline block valves are planned at the beginning and end of the 42-inch pipeline and at the connections with the tank farm sites (p. 2-35). Additional block valves at the two water crossings may improve spill prevention and reduction in the event there is a leak or rupture at the bridge crossings.

*Recommendation:*

The Corps and Port should consider whether additional remotely operated mainline block valves would help reduce impacts to water quality in the event of a leak or rupture at bridge crossings.

USEPA-21

**Consider a mitigation fund for impacts to water quality from oil spills.** According to the SDEIS, operational impacts to water quality could be significant due to oil spills (p. 3-14-39). Mitigation measures are intended to reduce the risks and impacts of spills, but lack any compensation for potential impacts. Due to the increased potential for impacts from oil spills associated with the Proposed Project and cumulative impacts from other oil terminal projects, the Corps and Port should identify mitigation measures to compensate for these impacts when they occur. While EPA recognizes the difficulty of identifying mitigation for unknown impacts, we note that the SDEIS anticipates these impacts could occur. We suggest the Port consider a mitigation program that could be funded through penalties to parties responsible for oils spills. The funds could be used to implement projects that improve water quality and clean, enhance, or create new habitat in the region, while providing additional safety incentives to responsible parties.

*Recommendation:*

The Port should develop a mitigation program that would improve water quality and clean, enhance, or create new aquatic habitat in the San Pedro Bay Harbor area. The fund could be based on penalties to responsible parties for oils spills in the Harbor. We also encourage the Port to coordinate with the Port of Long Beach and applicable federal, state, and local agencies on such a program.

USEPA-22

**Biological Resources**

**A port-wide marine mammal vessel strike reduction program should be developed.** The SDEIS describes potential direct and cumulative impacts to several marine species including marine mammals. According to the document, vessel strikes in the eastern North Pacific have been recorded for blue whale, fin whale, humpback whale, and sperm whale (p. 3.3-19). As described in the document, over the past twenty-five years, reported whale strikes along the California coast have averaged less than three per year; however, this number is misleading in that it is

limited to strikes that were both known and reported. As stated in the SDEIS, the actual number of vessel strikes is likely to be greater because not all strikes are reported.

USEPA-22

NOAA Fisheries has identified vessel strikes as a major, if not the single most significant, human-caused direct impact to whales. EPA recognizes benefits of the Port's mitigation measure BIO-1.2f, Expanded Vessel Speed Reduction Program, with regard to potentially reduced vessel strikes, as well as to air quality; however, we believe more could be done to avoid impacts to whales.

Recent research at Cornell University has found that listening for whales using underwater microphones has improved the ability to locate whales near shipping lanes, when compared to visual observation<sup>7</sup>. This research in Cape Cod Bay has led to a warning system for vessels to reduce their speed to 10 knots when whales are observed in the area. With the cumulative increase of projected ship traffic, the Port should consider improving methods to identify whales in and near shipping lanes serving the San Pedro Bay Ports.

*Recommendation:*

Consistent with EPA's comment in our July 21, 2008 letter regarding the China Shipping DEIS, the Port of LA should work with the Port of Long Beach to institute improved methods for identifying whales that are potentially in harm's way from vessels using the San Pedro Ports. A sound-based system similar to that used in Cape Cod should be considered as a way to inform ships of whales detected in the area and as a trigger to reduce their speeds. This is particularly important given the increasing vessel calls to the ports that are likely to result from increased throughput.

***Relocate Tank Farm 1 and expand the California least tern preserve.*** The Proposed Project would construct Tank Farm 1 on undeveloped land adjacent to the existing California least tern Pier 400 preserve. The SDEIS describes the importance of the preserve to the population of the species, including survey data indicating that the number of fledglings produced ranged from 45 percent of the state's total in 2005 to 20 percent in 2006, and 8 percent in 2007 (p 3.3-14). While it is unclear exactly why this percentage declined so dramatically over three breeding seasons, it may provide additional support for the importance of relocating the tank farm and expanding the preserve. It is also worth noting that an expanded preserve could increase the population of tern and other species, and improve their resilience to cumulative impacts of oil spills described in the SDEIS (p. 4-54). The Corps and Port should consult with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) regarding benefits to California least tern, and other species, that would result from expanding the preserve.

USEPA-23

*Recommendation:*

The Corps and Port should relocate the proposed Tank Farm 1 and use the undeveloped land to expand the California least tern Pier 400 preserve. The Corps and Port should consult with the USFWS and CDFG to identify the benefits to California least tern and other species that would inhabit the site.

<sup>7</sup> Lindsay, Jay. The Associated Press, Eavesdropping on Whales to Avoid Ship Strikes describes, May 7, 2007. Available on line at: <http://www.msnbc.msn.com/id/24501872/>

***Consider mitigations for cumulatively considerable impacts to eelgrass beds.*** The SDEIS describes cumulatively considerable impacts to eelgrass beds from oil spills but does not consider potential mitigation in the event this occurs (p. 4-56). The Corps and Port recognize eelgrass habitat as a special aquatic site and acknowledge that they could be significantly affected by oils spills, but consider mitigation unfeasible. Due to the increased potential for impacts from oil spills associated with the Proposed Project and cumulative impacts from other oil terminal projects, the Corps and Port should identify mitigation measures to compensate for these impacts when they occur. As described in our previous water quality comment, the Port should consider a mitigation program that could be funded through penalties to parties responsible for oils spills.

***Recommendation:***

The Port should develop a mitigation program that would clean, enhance, or create new eelgrass habitat in the San Pedro Bay Harbor area. The fund could be based on penalties to responsible parties for oils spills in the Harbor. We also encourage the Port to coordinate with the Port of Long Beach and applicable federal, state and local agencies.

**Noise**

***Consider changes in the construction schedule to reduce noise impacts on the local community.*** The SDEIS clearly describes basic information on noise, baseline noise conditions, and potential human health affects associated with excessive noise. The analysis predicts a significant and unavoidable impact from construction for the Proposed Project. Cumulative impacts to sensitive receptors from construction of the Proposed Project or any alternatives are considered cumulatively considerable.

Mitigation measures are proposed to reduce noise impacts from construction, including consistency with construction hours prescribed in the City of Los Angeles Noise Ordinance. This includes prohibiting construction between the hours of 7:00 AM and 9:00 PM on weekdays and between 8:00 AM and 6:00 PM on Saturdays. Given the construction duration and close proximity to sensitive receptors, EPA suggests soliciting input from the potentially affected community to determine whether construction until 9:00 PM on weekdays could be characterized to be, "In a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitiveness residing in the area" (41.40 LAMC- Construction Noise). The Port should also consider whether it would be appropriate to further mitigate noise impacts by avoiding the use of louder equipment, like hydro hammers, after 6:00 PM on weekdays.

***Recommendation:***

To further reduce noise-related health impacts to sensitive receptors near the Project, the Corps and Port should solicit input from the potentially affected community to determine whether construction until 9:00 PM on weekdays would be a disturbance. Consider avoiding the use of louder construction equipment, like hydrohammers, after 6:00 PM.

**U.S. Environmental Protection Agency, August 20, 2008**

**USEPA-1.** Thank you for your review of and comments on the Draft SEIS. Responses to your specific concerns about air quality, environmental justice, and aquatic and biological resources are provided in response to comments USEPA-2 through USEPA-5 and USEPA-7 through USEPA-25 below.

**USEPA-2.** The comment is noted. While the Corps Final SEIS discloses and discusses various construction and operational impacts and mitigation measures for the proposed Project and alternatives, the ROD would recognize that most of the mitigation measures identified in the SEIS/SEIR, particularly those focused on upland operations, would be implemented, maintained, and monitored by the Port of Los Angeles, as the local agency with continuing program control and responsibility, through its tenant leases. The Port believes that the CAAP is a lasting emission reduction plan for reduction of criteria pollutants. The mitigation measures contained in the Draft SEIS/SEIR would be in effect over a 30-year period and would minimize emissions from construction and operation. The CAAP, the construction mitigation, and the proposed Project level mitigation included in the Draft SEIS/SEIR, combined with federal, state and regional regulations, would result in a significant reduction of emissions at the Port and in the South Coast Air Basin.

Regarding conformity, please see the response to comment USEPA-13. Regarding the additional mitigation measures proposed in the comment letter, including those in excess of the CAAP, please see the response to comments USEPA-7 through USEPA-11.

**USEPA-3.** The comment is noted. The Port's primary means of reducing its air quality impacts on the community is by reducing the source of the impact (i.e., by reducing air emissions) through a variety of Port-wide clean air initiatives as well as through mitigation measures imposed on the construction and operation of specific leaseholders. Related to the commenter's suggestion to develop a Health Impact Assessment, please see the response to comment USEPA-16. Related to the commenter's concern about construction noise impacts, see the response to comment USEPA-25.

**USEPA-4.** USEPA's general concerns and additional mitigation recommendations are noted. Additional description regarding the definition of fill with respect to pilings and justification that additional mitigation is not warranted for conversion of soft bottom to hard substrate habitat is provided in response to comment USEPA-18. Additional response with respect to additional water quality protection measures at proposed tank farms and over-water pipeline crossings are addressed in response to comments USEPA-19 and USEPA-20, respectively. Additional response with respect to additional mitigation to address additional oil spill water quality cleanup is addressed in response to comment USEPA-21, and additional aquatic habitat cleanup and restoration is addressed in response to comment USEPA-24.

**USEPA-5.** USEPA's general concerns and additional mitigation recommendations are noted. Additional response with respect to marine mammal vessel strikes and additional mitigations beyond the vessel strike reduction program is addressed in response to comment USEPA-22. Additional response with respect to relocation of the proposed tank farm and expansion of the least tern preserve is given in response to comment USEPA-23.

**USEPA-6.** Thank you for your review of the Draft SEIS. Copies of the Final SEIS will be sent to the referenced address and others at USEPA.

**USEPA-7.** The comment is noted. While the Corps Final SEIS discloses and discusses various construction and operational impacts and mitigation measures for the proposed Project and alternatives, the ROD would recognize that most of the mitigation measures identified in the SEIS/SEIR, particularly those focused on upland operations, would be implemented, maintained, and monitored by the Port of Los Angeles, as the local agency with continuing program control and responsibility, through its tenant leases. The Port believes that the CAAP is a lasting emission reduction plan for reduction of criteria pollutants. The mitigation measures contained in the Draft SEIS/SEIR would be in effect over a 30-year period and would minimize emissions from construction and operation of all existing and future Port projects. The CAAP, along with the construction and operation mitigation for the proposed Project included in the Draft SEIS/SEIR, combined with federal, state and regional regulations, would result in a significant reduction of emissions at the Port and in the South Coast Air Basin.

As the comment notes, enforcement of lease measures, including mitigation measures that are incorporated as lease measures, shall be through reporting, conformance actions if deadlines are missed, and, where noncompliance cannot be remediated, revocation of the lease by the Port.

**USEPA-8.** While the Corps Final SEIS discloses and discusses various construction and operational impacts and mitigation measures for the proposed Project and alternatives, the ROD would recognize that most of the mitigation measures identified in the SEIS/SEIR, particularly those focused on upland operations, would be implemented, maintained, and monitored by the Port of Los Angeles, as the local agency with continuing program control and responsibility, through its tenant leases.

As shown in Table 3.2-22, the air quality mitigation measures identified in the Draft SEIS/SEIR met or, where feasible, exceeded CAAP measures. In addition, a number of the mitigation measures have been amended to further reduce emissions, namely MM AQ-14 and MM AQ-15 as shown below:

#### **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 hotelling for non-AMP ships) in the annual percentages in fuel requirements as specified below:

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



Year	Main Engines/Auxiliary Engines/Boilers					
	Inbound			Hoteling and Outbound		
	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~~

As discussed in Chapter 3.2, use of AMP would enable ships to turn off their auxiliary engines during hoteling, leaving the boiler as the only source of direct emissions. An increase in regional power plant emissions associated with AMP electricity generation is also assumed. Including the emission from ship boilers, a ship hoteling with AMP reduces its criteria pollutant emissions 88 to 98 percent, depending on the pollutant, when compared to a ship hoteling without AMP and burning residual fuel in the boilers.

AMP on container vessels and cruise ships is directed at reducing emissions from the relatively large hoteling loads present on these vessels. Tankers have smaller hoteling loads but also must support cargo offloading operations by producing steam power. The steam production capability cannot be replaced without complete vessel reconstruction. However, as mentioned earlier, the Project design includes a feature to minimize steam generation requirements via the use of shore-side electric pumps.

The Port will design and incorporate into Berth 408 all the necessary components to make full AMP available for those vessels capable of utilizing such facilities. The following addition has been included in the AMP discussion in the Final SEIS/SEIR.

In the alternative, the Port may, upon application by the tenant, and subject to all applicable laws and regulations, permit the tenant to install and employ and Alternative Maritime Emission Control System (AMECS) system, either in combination with or in place of AMP as designated in the Port's permit, to satisfy the requirements of this mitigation measure; provided that the Port first finds, based on environmental review prepared pursuant to CEQA, all of the following:

- (1) that AMECS is a feasible mitigation measure;
- (2) that the Port and CARB have verified that use of AMECS, as permitted by the Port, would achieve emissions reductions equivalent to or better than those identified in this SEIS/SEIR as occurring under this mitigation measure through the use of AMP alone; and
- (3) that either
  - a. the use of AMECS, as permitted by the Port to achieve the purposes of this mitigation measure, would result in no new or substantially more severe significant adverse impact to the environment, or
  - b. any new or substantially more severe adverse impact to the environment resulting from the use of AMECS as permitted by the Port to achieve the purposes of this mitigation measure would be mitigated to a less than significant level, or
  - c. overriding considerations, as defined under CEQA, make appropriate the use of AMECS as permitted by the Port to achieve the purposes of this mitigation measure.

Mitigation measures proposed in the SEIS/SEIR would become part of the Port lease with the tenant and would no longer be tied to implementation of the CAAP, so any changes to the schedule for CAAP implementation would not affect their implementation on the proposed Project construction or operation.

The Draft SEIS/SEIR also included Lease Measure MM AQ-20, Periodic Review of New Technology:

*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*

The above measure would set up a process for adding additional feasible environmental measures, identified through future revisions of the CAAP or other methods, over the life of the lease.

**USEPA-9.** As noted in Draft SEIS/SEIR Section 3.2, Section 3.2.4.3.2 Operations, full replacement of the vessel's pumps with shore-side pumps is not feasible due to the need for a hydraulic lift that would be required to pull the crude oil from the holds of the vessels. This initial lift over the side of the vessel must still be provided by ship pumps.

The comments suggest that shoreside pumps with enough power could pull crude oil from the ship without using shipboard pumps and the boilers that power these pumps. This concept is infeasible due to the construction of crude carriers, the physics of fluid flow, crude oil vapor pressure and the concept of "suction lift" (Flowserve, 2002, Cameron Hydraulic Data Book: Section 1, "Hydraulic Principals".)

At its most basic form, a crude carrier is a box of multiple compartments that floats in the water. When a crude carrier is full, the box sits very low with most of the box below water level and only a small part (freeboard) visible above the water. As the crude oil is removed from the crude carrier, the box rises with respect to the water because the crude carrier is lighter as there is less crude oil inside. Therefore, the position of the ship relative to the dock changes with the amount of crude oil in the crude carrier and with the tidal change in water level.

The depth of the crude carrier is in the range of 50 to 100 feet. If the crude were pulled from the compartments of the tank, some component of the crude oil would vaporize as it is lifted from the bottom of the ship to the deck of the ship (this effect is referred to as suction lift). Suction lift exists when the liquid supply level or suction source is below the pump centerline or impeller eye. Total suction lift is equal to the static lift (the depth of the ship's hull) plus all frictional losses in the suction line including entrance loss (the end of the pipe where the crude oil enters the pipe.)

The maximum theoretical height that 68°F water can be lifted is 33 feet. Water has a vapor pressure of 0.339 pounds per square inch absolute (psia) at 68°F. Crude oil will have a vapor pressure of 4-8 psia. The maximum theoretical lift that can be achieved for crude oil is about 15-16 feet. This number does not include frictional losses within the piping. The crude oil cannot get to the deck (50 to 100 feet above the bottom of the ship.) In addition to needing to raise the crude oil to the upper levels of the ship, the crude oil is generally offloaded from the ship via a series of offloading marine transfer arms referred to as "loading arms". Typically these loading arms, due the fact they are designed to accommodate a wide variety of ships (size, length, and width) along with the various tidal and wave actions that can be encountered, extend a considerable distance above the ships (at least another 30 to 40 feet), in effect increasing the amount of elevation that the crude

oil would actually need to be lifted by an on-shore suction action. This situation is another major reason that the pumps on board the vessel are critical to the crude oil cargo offloading of the ship.

Crude carriers have pumps located at the bottom of the ship to avoid the suction lift effect. The pumps are connected to the various compartments in the ship that contain the crude oil. These pumps are virtually always driven by steam turbines that are supplied with steam generated by on-board boilers. The proposed design has the ship's pumps pumping the crude oil out of the ship's hull through the ship's piping system, through loading arm structures and onto the shore. This will require relatively low power when compared to other marine terminals where the ship might pump 5 or 6 miles to the tank farm. The current design requires the ship's pumps to pump through a 42-inch diameter pipeline approximately ½ mile to the electrically driven shoreside pumps which will add the pressure required to pump the oil the remaining distance to the tank farm.

**USEPA-10.** While the Corps Final SEIS discloses and discusses various construction and operational impacts and mitigation measures for the proposed Project and alternatives, the ROD would recognize that most of the mitigation measures identified in the SEIS/SEIR, particularly those focused on upland operations, would be implemented, maintained, and monitored by the Port of Los Angeles, as the local agency with continuing program control and responsibility, through its tenant leases.

Per the LAHD Sustainable Construction Guidelines for Reducing Air Emissions, all off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet Tier 2 emission off-road standards prior to December 31, 2011. Beginning January 1, 2012 to December 31, 2014, all off-road diesel-powered construction equipment greater than 50 hp, except ships and barges and marine vessels, shall meet Tier 3 emission off-road standards. Based on the current estimated construction schedule, under which construction would be completed prior to December 31, 2011, the air quality modeling analysis assumes off-road diesel-powered construction equipment would meet Tier 2 emission off-road standards. However, if construction is delayed for any reason and part or all of the construction occurs on or after January 1, 2012, the construction equipment would meet Tier 3 emission off-road standards, consistent with Port policy.

**USEPA-11.** Please see response to comment USEPA-8. MM AQ-15 has been modified to increase AMP participation rates and Alternative Maritime Emission Control System (AMECS) requirements as shown below to further reduce boiler emissions:

**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

As discussed in Chapter 3.2, use of AMP would enable ships to turn off their auxiliary engines during hoteling, leaving the boiler as the only source of direct emissions. An increase in regional power plant emissions associated with AMP electricity generation is also assumed. Including the emission from ship boilers, a ship hoteling with AMP reduces its criteria pollutant emissions 88 to 98 percent, depending on the pollutant, when compared to a ship hoteling without AMP and burning residual fuel in the boilers.

AMP on container vessels and cruise ships is directed at reducing emissions from the relatively large hoteling loads present on these vessels. Tankers have smaller hoteling loads but also must support cargo offloading operations by producing steam power. The steam production capability cannot be replaced without complete vessel reconstruction. However, as mentioned earlier, the Project design includes a feature to minimize steam generation requirements via the use of shore-side electric pumps.

The Port will design and incorporate into Berth 408 all the necessary components to make full AMP available for those vessels capable of utilizing such facilities. The following addition has been included the AMP discussion in the Final SEIS/SEIR.

In the alternative, the Port may, upon application by the tenant, and subject to all applicable laws and regulations, permit the tenant to install and employ an Alternative Maritime Emission Control System (AMECS) system, either in combination with or in place of AMP as designated in the Port's permit, to satisfy the requirements of this mitigation measure; provided that the Port first finds, based on environmental review prepared pursuant to CEQA, all of the following:

- (1) that AMECS is a feasible mitigation measure;
- (2) that the Port and CARB have verified that use of AMECS, as permitted by the Port, would achieve emissions reductions equivalent to or better than those identified in this SEIS/SEIR as occurring under this mitigation measure through the use of AMP alone; and
- (3) that either
  - a. the use of AMECS, as permitted by the Port to achieve the purposes of this mitigation measure, would result in no new or substantially more severe significant adverse impact to the environment, or
  - b. any new or substantially more severe adverse impact to the environment resulting from the use of AMECS as permitted by the Port to achieve the purposes of this mitigation measure would be mitigated to a less than significant level, or
  - c. overriding considerations, as defined under CEQA, make appropriate the use of AMECS as permitted by the Port to achieve the purposes of this mitigation measure.

The Final SEIS/SEIR clarifies the position of the Port with respect to the potential use of AMECS as a mitigation measure (see Section 3.2 of the Final SEIS/SEIR and specifically

the discussion of MM AQ-15). The Final SEIS/SEIR clarifies that if AMECS becomes technologically feasible, then the Port will evaluate its effectiveness and its equivalence with respect to AMP consistent with MM AQ-19 and MM AQ-20. If it is found to be feasible, effective, and equivalent in terms of reductions of pollutants of significance, then the Port will require the tenant to install AMECS. Once AMECS is installed, all vessels calling at Berth 408 that are not capable of utilizing AMP, as well as frequent callers (i.e., vessels that call more than two times per year), must use AMECS. If AMECS is not available within the lifetime of the proposed Project or if it is not found to be feasible or equivalent to AMP, then ships calling at Berth 408 shall use AMP while hoteling at the Port in the minimum percentages specified in MM AQ-15.

Finally, it should be noted that ships are federal sources for at least some distance from shore and promulgation of regulations by U.S. EPA, which is federal authority for controlling such emissions, would assist in the ability of Ports throughout the nation to reduce emissions from these sources.

**USEPA-12.** We assume the comment intended to refer to a comparison of Table 3.2-11 and 3.2-13, rather than a comparison of Table 3.2-11 and 3.2-50. Table 3.2-11 shows peak daily emissions for proposed Project construction activities without mitigation and Table 3.2-13 shows the same with mitigation, whereas Table 3.2-50 shows average daily emissions for the Reduced Project Alternative operation without mitigation. The relationship identified in the comment, that mitigated construction emissions of CO (as shown in Table 3.2-13) exceed unmitigated emissions (as shown in Table 3.2-11), is accurate. This counterintuitive result is a direct result of some of the specific practices used to control NO<sub>x</sub> emissions, specifically the increase in fuel-to-air ratio for diesel engines. Increasing the fuel-to-air ratio decreases NO<sub>x</sub> emissions but increases CO emissions due to less complete combustion of fuel. No revision to the document is needed.

Note that due to an error in transcribing the summary table from a detailed table, the values for certain emissions have changed in Tables 3.2-11 and 3.2-13 (see response to comments SCAQMD-10 and SCAQMD-11 for more information). However, the counterintuitive relationship between the unmitigated and mitigated emissions still holds (i.e., CO emissions are higher in the mitigated case).

**USEPA-13.** On November 30, 1993, EPA promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. On September 14, 1994, SCAQMD adopted these regulations by reference as part of Rule 1901. The general conformity regulations apply to a proposed federal action in a nonattainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants caused by the proposed action equal or exceed certain de minimis amounts, thus requiring the federal agency to make a determination of general conformity. Regardless of the proposed action's exceedance of de minimis amounts, if this total represents ten percent or more of the area's total emissions of that pollutant, the action is considered regionally significant and the federal agency must make a determination of general conformity. By requiring an analysis of direct and indirect emissions, EPA intended the regulating federal agency to make sure that only those emissions that are reasonably foreseeable and that the federal agency can practicably control subject to that agency's continuing program responsibility will be addressed. The general conformity regulations incorporate a stepwise process, beginning with an applicability analysis.

According to EPA guidance (EPA 1994), before any approval is given for a proposed action to go forward, the regulating federal agency must apply the applicability requirements found at 40 CFR 93.153(b) to the proposed action and/or determine the regional significance of the proposed action to evaluate whether, on a pollutant-by-pollutant basis, a determination of general conformity is required. The guidance states that the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under the National Environmental Policy Act (NEPA). If the regulating federal agency determines that the general conformity regulations do not apply to the proposed action, no further analysis or documentation is required. If the general conformity regulations do apply to the proposed action, the regulating federal agency must next conduct a conformity evaluation in accord with the criteria and procedures in the implementing regulations, publish a draft determination of general conformity for public review, and then publish the final determination of general conformity.

A conceptual plan for the proposed Project was included in the Port's 2020 Plan which was incorporated into the 1997 SIP. However, based on changes to the proposed Project, a general conformity determination may still be necessary for the proposed federal action. If necessary, the Draft Conformity Determination will be prepared and circulated for public review prior to Federal action associated with the proposed Project, consistent with Federal guidance.

**USEPA-14.** Thank you for acknowledging the efforts of the Port and Corps to address environmental justice issues.

**USEPA-15.** The Corps and Port are committed to mitigating disproportionate effects to the extent feasible. The Port's primary means of mitigating the disproportionate effects of air quality impacts is to address the source of the impact through a variety of Port-wide clean air initiatives, including the CAAP, the Sustainable Construction Guidelines, and the proposed CAAP San Pedro Bay [Health] Standards. As part of the San Pedro Bay Standards, the Port will complete a Port-wide Health Risk Assessment (HRA) covering both the Port of Los Angeles and the Port of Long Beach that will include a quantitative estimate of health risk impacts from Diesel Particulate Matter (DPM) emissions of the Ports' overall existing and planned operations. Current and future proposed projects' approval will be dependent on meeting the San Pedro Bay Standards.

The primary purpose of the proposed San Pedro Bay Standards is to provide a valuable tool for long-term air quality planning, aiding the Ports and the agencies with evaluating and substantially reducing the long-term overall health risk effects of future projects and on-going port operations' emissions over time. The ports will use the San Pedro Bay Standards in CEQA documents as a tool in the cumulative health risk discussions, although consistency with the Standards will not serve as a standard of impact significance. When evaluating projects, a consistency analysis with the assumptions used to develop the health risk and criteria pollutant San Pedro Bay Standards will be performed in order to ensure that the proposed project is fully contributing to attainment of the San Pedro Bay Standards. The forecasting used to develop San Pedro Bay Standards assumed implementation of the CAAP and on projected future Ports' operations through the specified CAAP implementation mechanisms and also assumed implementation of existing regulations. As long as the project is consistent with growth projection assumptions used to develop the San Pedro Bay Standards, and the CAAP mitigations for the project are consistent with the mitigation assumptions used to develop the San Pedro Bay Standards, then the project

can be deemed consistent with the San Pedro Bay Standards. The proposed Project is consistent with the San Pedro Bay Standards as it is consistent with projections of the Ports' future operations used in formulating the San Pedro Bay Standards, and as it exceeds compliance with applicable CAAP measures as shown in Table 3.2-22 of the Draft SEIS/SEIR.

The Port is also developing a comprehensive Climate Change Action Plan to address GHG emissions from Port operations. GHG emissions at the Port are largely a function of diesel combustion and thereby addressing these emissions will not only help address potential climate change effects but also local health issues from diesel sources.

In addition, through a Memorandum of Understanding, the Port has previously agreed to establish a Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by Port operations outside of the context of project-specific NEPA and/or CEQA documents. This fund includes, for example, approximately \$6 million for air filtration in schools and funding for an initial study of off-Port impacts on health and land use in Wilmington and San Pedro, as well as a more detailed subsequent study of off-Port impacts of existing Port operations, examining aesthetics, light and glare, traffic, public safety and effects of vibration, recreation, and cultural resources related to port impacts on harbor area communities. As part of the MOU, the Port would contribute \$0.15 per ton of crude oil received at the terminal up to an amount of approximately \$5 million. The off-Port community benefits of the MOU are designed to offset overall effects of existing Port operations. While the MOU does not alter the legal obligations of the lead agencies under NEPA or CEQA to disclose and evaluate mitigation measures to reduce or avoid cumulative impacts of the Project, and therefore is not an environmental justice mitigation per se, it would have particular benefits for harbor area communities where disproportionate effects could occur.

Temporary, project-related construction noise and the associated disproportionate effects would be mitigated to the extent feasible, through measures such as selection of the contractor for pile driving with consideration of noise, restricted hours for pile driving, use of temporary noise attenuation barriers, and other measures (see Section 3.10). Disproportionate effects associated with risk of upset (i.e., a terrorist attack) would be mitigated to the extent feasible through port-wide security measures (see Section 3.12). Disproportionate effects from recreation impacts due to noise and spills would be addressed through noise mitigations such as those listed above and additional measures such as double-hulled vessels and quick release couplings.

**USEPA-16.** Please see response to USEPA-15. As part of the San Pedro Bay Standards, the Port will complete a Port-wide Health Risk Assessment (HRA) covering both the Ports of Los Angeles and Long Beach that will include a quantitative estimate of overall health risk impacts from the Ports' existing and planned operations. Current and future projects' approval will be dependent on meeting the San Pedro Bay Standards.

The primary purpose of the San Pedro Bay Standards is to provide a valuable tool for long-term air quality planning, aiding the Ports and the agencies with evaluating and substantially reducing the long-term overall effects of future projects and on-going port operations emissions over time. The ports will use the San Pedro Bay Standards in CEQA documents as a tool in the cumulative health risk discussions, although consistency with the Standards will not serve as a standard of impact significance. When evaluating projects, a consistency analysis with the assumptions used



to develop the health risk and criteria pollutant San Pedro Bay Standards will be performed in order to ensure that the proposed project is contributing to attainment of the San Pedro Bay Standards. The forecasting used to develop San Pedro Bay Standards assumed implementation of the CAAP through the specified implementation mechanisms and implementation of existing regulations. As long as the mitigations for the project are consistent with the assumptions used to develop the San Pedro Bay Standards, then the project can be deemed consistent with the San Pedro Bay Standards. The proposed Project is consistent with the San Pedro Bay Standards as it is consistent with the growth projections assumed in developing the San Pedro Bay Standards and exceeds compliance with applicable CAAP measures as shown in Table 3.2-22 of the Draft SEIS/SEIR. The San Pedro Bay Standards were developed in close coordination with the South Coast AQMD and CARB.

The comment suggests conducting a port-wide Health Impact Assessment (HIA). According to the World Health Organization (WHO), a Health Impact Assessment (HIA) is “*A combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population*”. Recommendations are produced for decision makers and stakeholders, with the aim of maximizing the proposal’s positive health effects and minimizing the negative health effects. Because the Draft SEIS/SEIR discloses the environmental impacts, including health risk impacts, of the proposed Project, the Draft SEIS/SEIR is not required to additionally include a separate, full-blown HIA. Nevertheless the Draft SEIS/SEIR included a number of health assessment tools to accomplish many of the goals of an HIA. These tools include a full project-specific Health Risk Assessment (HRA), criteria pollutant modeling, morbidity/mortality analysis, an Environmental Justice analysis, and a Socioeconomic analysis. These analyses are presented in the Draft SEIS/SEIR for the proposed Project and all project alternatives (including the No Federal Action/No Project Alternative), allowing the reader, and subsequently the Board (the decision makers) to compare and contrast the benefits and costs among all proposals.

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

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

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

The Environmental Justice Section (Chapter 5) of the Draft SEIS/SEIR evaluates whether the proposed Project and its alternatives would result in disproportionately high and adverse human health or environmental impacts on minority populations and low-income populations. The Environmental Justice analysis looks at the Project and cumulative impacts as assessed in Chapter 3 and 4 of the Draft SEIS/SEIR on minority and low-income individuals in the local communities surrounding the Port. The Socioeconomic Section (Chapter 7) encompasses a number of topical areas including employment and income, population, and housing. Within each of these areas, subtopics include an examination of conditions at different geographical scales that are relevant to the potential impacts associated with implementation of the proposed Project.

In addition, please see response to USEPA-15 regarding the Port Community Mitigation Trust Fund geared towards addressing the overall off-port impacts created by Port operations.

**USEPA-17.** Please see response to USEPA-15. The Corps and Port are committed to mitigating disproportionate effects to the extent feasible. The Port's primary means of mitigating the disproportionate effects of air quality impacts is to address the source of the impact through a variety of Port-wide clean air initiatives, including the CAAP, the Sustainable Construction Guidelines, and the CAAP San Pedro Bay [Health] Standards. As part of the San Pedro Bay Standards, the Port will complete a Port-wide Health Risk Assessment (HRA) covering both the Ports of Los Angeles and Long Beach that will include a quantitative estimate of overall health risk impacts from the Ports' existing and planned operations. Current and future projects approval will be dependent on meeting the SPB Standard. Through a Memorandum of Understanding, the Port has previously agreed to establish a Port Community Mitigation Trust Fund geared towards addressing, outside the process of CEQA/NEPA review of individual proposed Port projects, the overall off-port impacts created by existing Port operations. This fund includes, for example, approximately \$6 million for air filtration in schools and funding for an initial study of off-Port impacts on health and land use in Wilmington and San Pedro, as well as a more detailed subsequent study of off-Port impacts examining aesthetics, light and glare, traffic, public safety and effects of vibration, recreation, and cultural resources related to port impacts on harbor area communities. As part of the MOU, the Port would contribute \$0.15 per ton of crude oil received at the terminal up to an amount of approximately \$5 million. The off-Port community benefits of the MOU are designed to offset overall effects of existing Port operations. While the MOU does not alter the legal obligations of the lead agencies under NEPA or CEQA to disclose and evaluate mitigation measures to reduce or avoid cumulative impacts of the Project, and therefore is not an environmental justice mitigation per se, it would have particular benefits for harbor area communities where disproportionate effects could occur.

The remainder of this response addresses the individual mitigations suggested in the comment. Regarding the suggestion to engage in proactive efforts to hire local workers and the suggestion to provide public education programs, the Port has an on-going set of mechanisms to promote inclusion of small, minority, woman-owned and similar business enterprises, many of which are located in the local area, in its contracting. In addition, job training targeted to Harbor Area communities is provided by economic development organizations, the City of Los Angeles, and other entities. The Port provides outreach to

the community in the form of meetings with the PCAC and other community groups and individuals and provides community education information on its website, in newsletters that are available in English and Spanish, through outreach at community events and festivals, and by other means.

Related to the suggestion of anti-idling requirements, for the proposed Project, imported crude oil would be transported via pipeline to refineries, not by truck; thus anti-idling requirements would not be relevant to the proposed marine terminal operation in the same manner as a container terminal operation.

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

**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.

Related to the suggestion of establishing Environmental Management Systems, the Port has developed and is implementing an award-winning Environmental Management System (briefly summarized in Section 1.6 of the Draft SEIS/SEIR) that improves efficiency and reduces environmental impacts from operations.

Related to the suggestion to improve access to healthy food by establishing markets on Port lands, most of the land administered by LAHD is zoned to allow for coastal dependent cargo transport activities and related facilities. Also, the Port is operated and managed under a State Tidelands Trust that grants local municipalities jurisdiction over

ports and stipulates that activities must be related to commerce, navigation and fisheries. Thus, although some of the land administered by LAHD is zoned in such a way that it could accommodate a retail or commercial use, establishing a retail outlet or farmer's market would not be consistent with LAHD's central purpose.

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

**USEPA-18.** The document has been revised to include further description of the pile-supported structures and clarification of the reasons that pilings do not constitute fill material pursuant to Section 404 of the Clean Water Act, consistent with 33 CFR Section 323.3(c) and Regulatory Guidance Letter 90-08. Specifically, "placement of pilings do not ordinarily constitute fill material", particularly where "pilings [are] generally used for traditional pile-supported structures such as docks and bridges where the effect, purpose, and function of the pilings [are] not to replace an aquatic area with dry land or to change the bottom elevation of a water body." Piers, walkways, and wharves are also included in the list of structures traditionally placed on piles that are not regulated under Section 404 of the Clean Water Act. However, the Corps regulates pilings as fill if the "pilings [are] being used as a substitute for fill material," or have this effect by facilitating sedimentation, placement so close together that they displace a substantial percentage of the water in the project area, or the structure on top of the pilings is placed in such a manner as to constitute the functional equivalent of fill. For this project, most pilings would not have the effect of a discharge of fill because they are not close enough to each other to impair the flow or circulation of waters of the United States or increase sedimentation rates.

In contrast, the placement of protective rock around 42 of the larger pilings in deepwater is identified as a fill consistent with 33 CFR 323.2(e, f) and would be subject to regulation pursuant to Section 404 of the Clean Water Act. Because the pilings would be centered within rock patches, the total area of conversion of protected deepwater soft bottom to hard substrate habitat would be approximately 0.1 acre (0.09 acre rock, 0.02 acre pilings). The functional effect would be negligible because the area of fill would occur in relatively small, discrete patches and there would only be a minor change in water depth from rock placement in deep water (-65 to 70 feet MLLW). Mitigation is not warranted because the localized patches of fill would not result in adverse alteration or elimination of aquatic functions. Pilings and submerged rock provide forage and shelter for invertebrates and fish in the harbor (MEC and Associates 2002). In addition, the pile-supported structures are relatively narrow linear features that would not result in adverse shading effects. The small conversion of deep outer harbor soft bottom habitat (less than 0.01 percent) would not be cumulatively adverse. Protected deepwater soft bottom and artificial rocky substrate have equivalent resource agency weighting values for Los Angeles Harbor (USACE and LAHD 1992).

**USEPA-19.** EPA has requested that the feasibility of increasing the tank area dike capacities to "more adequately contain an oil spill in the event of a catastrophic event" be considered and discussed in the FEIS.

The dikes for the proposed project's storage tanks exceed state and local requirements adopted for the purpose of adequately containing oil spills in the event of catastrophic events. There is no evidence that even larger dikes are more effective at mitigating significant impacts or are economically feasible. The Southern California area has undergone several major seismic events in the last 40 years and in no event has there been an example of multiple tank failures. In fact, the Port and Corps are unaware of any instance in the U.S. in the last 20 years in which there have been multiple tank failures. In addition, the project tanks will all be newly constructed and will be designed to comply with current design requirements and construction standards.

The California State Fire Code in Section 3404.2.10.1 requires "The volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area. The capacity of the diked area enclosing more than one tank shall be calculated by deducting the volume of the tanks other than the largest tank below the height of the dike". These requirements apply to all tank farms, some of which may be decades old. If the regulations are considered sufficiently protective for such storage facilities, they would appear to be more than adequate for entirely new tanks.

The City of Los Angeles Municipal Code requires the same, in section 57.13.12(A), "The net volumetric capacity available to a tank or group of tanks within a common diked area shall be not less than 100 percent of the largest tank enclosed by the diked area." Thus, two separate agencies have determined that 100 percent capacity of the largest tank in a diked area is all that needs to be required.

The proposed dike containment for the project is designed to not only hold the contents of the largest tank as required by city, state and federal law, but an additional volume that can accommodate 24 hours of rainfall at the 25 year storm frequency rate as published by NOAA. Thus, capacity to contain potential leaks has already been provided at a level that is significantly greater than regulatory requirements since the chances that a catastrophic leak would occur at the same time as a 25 year storm are almost non-existent. The allowance for rainwater increases the dike capacity by 10 percent. The current containment provisions exceed the applicable regulations noted above and there is no evidence that additional capacity is necessary.

**USEPA-20.** DOT 195.260(e) states that valves are required "On each side of a water crossing that is more than 100 feet (30 meters) wide from high-water mark to high-water mark unless the Administrator finds in a particular case that valves are not justified."

The project considered valves around the bridge crossings. In this case, it was decided by the design team that the additional valves were not justified because they would not reduce the spill volumes should a leak occur on the bridge. The reasoning was as follows:

The pipeline route elevation is relatively flat. The pipeline is buried a minimum of 4 feet below ground elevation. All the project bridge crossings will be the high points in their respective pipelines route segments. The maximum spill volume at the bridge crossings will be the volume of the pipe on the bridge. The spill volume would be unaffected by additional blocks valves around the bridge crossings.

In addition, the system is designed with leak detection capability. When a leak is detected the shipping pumps are shut down and the pipeline facility block valves are closed, so no additional crude oil is introduced in to the system.

**USEPA-21.** The draft document identifies all feasible mitigation measures to reduce or avoid the significant impacts to water quality that would result from oil spills attributable to the proposed Project. The proposed measure to fine parties responsible for oil spills would not effectively reduce or avoid those impacts to the environment, and is therefore not appropriate for implementation on the proposed Project pursuant to environmental review under CEQA or NEPA. Nevertheless, outside the context of CEQA/NEPA review of the proposed Project, the Port of Los Angeles is currently developing a Water Resources Action Plan (WRAP) in conjunction with the Port of Long Beach and involving stakeholder participation from a number of regulatory agencies and environmental groups. The WRAP would establish a comprehensive port-wide program to reduce impacts to water quality from a variety of sources including storm drain runoff, urban runoff, boat spills and dumping, and invasive species.

**USEPA-22.** The document has been revised to clarify that the reported whale strikes discussed in the SEIS/SEIR are for the entire coast of California and not just in the vicinity of the Los Angeles-Long Beach Harbor. Although the actual number of vessel strikes off California is likely to be greater than the number reported, the overall potential number associated with cargo vessels traveling to or from Los Angeles harbor remains a very low number. Because most vessel strike injuries are associated with fast moving vessels, the Port's expanded vessel speed reduction program would substantially lower the risk of vessel strike injury to whales in the vicinity of the harbor. Therefore, the probability of a Project-related vessel injuring whales is very low. For this reason, the impact was determined to be less than significant under CEQA and NEPA, and less than cumulatively considerable under NEPA (there would be no contribution under NEPA because there would be fewer vessels under the proposed Project compared to the NEPA Baseline).

An acoustic detection program was initiated off Cape Cod Bay, Massachusetts, to reduce the potential for vessel collisions with North Atlantic right whales. This species was hunted to near extinction, and the current population is now at an estimated 350 to 400 individuals. The Cape Cod Bay system consists of 13 acoustic buoys that can detect right whales within a 5-mile radius. The buoys are moored within Cape Cod Bay and offshore in the shipping lanes. If right whales are detected, certain ships are required to slow to 10 knots and post lookouts to assist in sighting whales. That program was instituted because the shipping lanes cross prime feeding grounds of that endangered species. In contrast, the nearshore area off Los Angeles harbor is used by migratory and transient whales, but is not an area where endangered marine mammals concentrate for feeding and/or reproduction. In addition, there are behavioral differences between the right whales and the whales most commonly seen in Southern California and physical differences between the Eastern and Western seaboard; therefore, the measures introduced in Cape Cod may not be as effective in Southern California.

Several differences exist between Cape Cod Bay and the waters off Los Angeles-Long Beach Harbors. The shipping lanes where the buoys are moored off Cape Cod are in waters ranging up to 400 feet (122 meters) deep. The shipping lanes off the harbors of Los Angeles and Long Beach are considerably deeper, exceeding 400 fathoms (2,400 feet or 732 meters) north of the harbors. Also unknown is the whale species that the buoy

system would apply to along the California coast. Grey whales are not as vocal as some other whale species, and they are likely to be the most abundant whales in the area during specific times of year. The Port also looked at a paper regarding forward-looking sonar on ships. The ship-mounted sonar gave a warning within a radius of up to 276 feet (84 meters), which is less than the length of most oceangoing vessels. Such a system would not provide adequate warning time or distance for an oceangoing vessel to take evasive action.

The Port however, remains committed to its vessel speed reduction (VSR) program to reduce both air emissions and reduce potential whale strikes. The Port's VSR program includes slowing of vessel speed to 12 knots over a geographically large area between 40 nm of Point Fermin and the Precautionary Area from Year 1 of operation.

**USEPA-23.** The comment suggested relocating Tank Farm 1 to expand the California least tern preserve. There is not enough open area at Tank Farm 2 to accommodate the tanks proposed for Tank Farm. It should also be noted, that the sizing of the least tern nesting site to 15 acres was done with intent of providing adequate space/buffering taking into account the surrounding land uses. Specifically, the intent of the interagency MOA is "not to encumber more than fifteen (15) acres". Additional buffering measures associated with the project-specific assessment have been incorporated in consultation with the USFWS.

CEQA and NEPA authorize implementation of mitigation measures only for the purpose of reducing or avoiding significant impacts attributable to a proposed Project. Since the observed decreases in nesting at the site as a proportion of statewide tern nesting is due to factors entirely extraneous to any proposed construction or operations activity under the proposed Project, neither CEQA nor NEPA authorizes a relocation of Project tanks from Tank Farm 1 to Tank Farm 2 as mitigation for Project impacts.

The California least tern has been known to nest in the Los Angeles Harbor area since the late 1800's although nesting data were not regularly recorded until 1973. In 1979, the Los Angeles Harbor Department (LAHD), in consultation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), began providing nesting habitat for the California least tern. In 1984, LAHD entered into a Memorandum of Agreement (MOA) with USFWS, U.S. Army Corps of Engineers (ACOE) and CDFG. The MOA, renewed every three to five years, requires the LAHD to provide 15 acres of suitable, protected nesting habitat and specifies responsibilities of the various parties to the MOA with respect to management of the "Terminal Island" least tern nesting site. This nesting site location has changed over the years. From 1970 through 1985, least terns nested primarily at Reeves Field, located (at that time) south of Seaside Avenue and west of the former Long Beach Naval Station. From 1981 through 1989, least terns nested on dredge fill created for Pier 300 and protected by the LAHD at the southern end of Ferry Street. From 1989 through 1997, least terns used a securely fenced nesting site provided by LAHD on the eastern edge of Pier 300. In 1997, a new Nesting Site was prepared on Pier 400 (current location).

Nesting began to increase in 1993 as a result of active management, site preparation and more consistent and effective predator management. In 1993 there were 10 nesting pairs; that number steadily increased to 1,254 pairs in 2005. Since 2005 nesting has decreased slightly to 669 pairs in 2007 and to less than 500 pairs in 2008. The reasons for the decline are numerous and include:

- 1) The creation in 2005 and 2006 of additional nesting sites for the least tern as part of the Bolsa Chica Lowlands Restoration Project in Huntington Beach (approximately 12 miles south of the Port of Los Angeles, where numbers of least tern nesting pairs have increased from approximately 130 in 2005 to 200 in 2007 (Marschalek 2005, 2006, 2007, 2008); some of these birds may have relocated from their usual nesting site at the Los Angeles Harbor due to factors discussed in bullets 4 and 5 below. [Massey and Atwood (1981), as well as subsequent observations of color-banded adult least terns, indicate that when a nesting colony is disturbed, least terns may abandon the site to nest (or renest) at a nearby nesting site.]
- 2) The increase in the number of least tern nesting pairs at Venice Beach, approximately 20 miles north of the Port of Los Angeles. Least tern nesting at Venice Beach, the only other least tern nesting site in Los Angeles County, had been unsuccessful due to recurrent predation by American crows (*Corvus brachyrhynchos*). More effective management of the American Crow population preying on least tern eggs and chicks beginning in 2006 resulted in an increase in least tern nesting pairs from 17 in 2004 and 90 in 2005 to 302 in 2006 and 450 in 2007. During years when American crow predation was high at Venice, it is assumed that many least tern pairs that typically use the Venice site for nesting failed to nest there and instead used the Los Angeles Harbor nesting site. [This cannot be reliably concluded without an intensive study involving observations from a bird blind of individually-color-banded least tern at both the Venice and Los Angeles Harbor nesting sites. However, such a study is not possible because few individually-color-banded least terns remain in the population following an intensive color-banding study in the late 1980's. Instead, increases in the number of nests at the Los Angeles Harbor least tern nesting site (for example, 250 least tern nests were found in one day, May 16, in 2005, compared with less than 200 nests found during previous and subsequent days) suggest a recent influx of least tern, possibly some that are arriving from other sites.] Note that prior to heavy predation by American crows at Venice, this nesting site had typically supported over 300 nesting pairs (Marschalek 2005, 2006, 2007, 2008).
- 3) Fluctuations in the abundance and availability of least tern prey. Least terns preferred prey is northern anchovy (*Engraulis mordax*) and other small bait fish, which although populations can be highly variable, are the most common pelagic fish species in the Port (MEC and Associates 2002). Because information on local occurrence of bait fish populations may not be available, anecdotal evidence (e.g., high observed chick mortality), increases in water temperatures during the chick-fledgling period (anchovies prefer cooler waters), and a decrease in observations of least tern parents bringing fish into the nesting site are all factors used by least tern biologists to infer at least a localized insufficiency in least tern prey (KBC 2003 and 2005). [On the subject of chick mortality, observed chick mortality includes the number of chicks observed dead from unknown causes or from depredation (evidence includes dismantled chick carcasses). For example, at the Los Angeles Harbor nesting site, chick mortality (898 dead chicks) represented 41% of all hatched eggs in 2005, and 44% in 2007 (KBC 2005 and 2007a).]



- 4) In addition to high observed chick mortality (see item 3 above), the Los Angeles Harbor nesting site has experienced a high number of potential avian predators, particularly peregrine falcon (*Falco peregrinus*) and burrowing owl (*Athene cunicularia*) during recent years. Frequent visits to a nesting site by peregrine falcons, which prey on young as well as adult least tern, results in temporary nest abandonment, or sometimes in abandonment of the nesting site (K Keane, pers. comm.). The increase in peregrine falcons in the Los Angeles Harbor area is a result of higher reproductive success in recent years (for example 9 fledglings in 2007 [Jeff Sipple, pers. comm.]); the fledglings disperse and are often observed at the Los Angeles Harbor nesting site, sometimes preying on least tern but always causing adults to leave nests. These more frequent disturbances have likely provoked some least that previously nested at the Los Angeles Harbor nesting site to nest elsewhere (as noted in bullet 1 above, Massey and Atwood (1981), as well as subsequent observations of color-banded adult least terns, indicate that when a nesting colony is disturbed, least terns may abandon the site to nest (or re-nest) at a nearby nesting site).

Burrowing owls, which were observed only occasionally at the Los Angeles Harbor nesting site until 2005, preyed on a minimum of 86 chicks in 2006, as evidenced by chick remains (KBC 2005), and 23 chicks in 2007. However, the actual number of least tern chicks depredated by burrowing owls in 2007 is believed to be far higher, since burrowing owl observations were recorded at the Los Angeles Harbor nesting site from May through July 2006, and five separate individual burrowing owls were live-trapped and removed from the site (KBC 2007a). As discussed for peregrine falcons, the frequent presence of burrowing owls may encourage pre-nesting least tern to find another nesting site, resulting in lower least tern numbers at the Los Angeles Harbor nesting site. The recent increase in peregrine falcons and burrowing owls at the Los Angeles Harbor nesting site is likely not related to the proximity of the site to industrial uses, since both species are predators at nesting sites surrounded by open space as well as developed areas, and the APL container terminal adjacent to the nesting site provides no nesting and few foraging opportunities that would attract either species to the area (K. Keane, personal communication 2008).

- 5) Following an initial increase in the number of least tern nesting pairs statewide from 4,615 to 7,103 in 2005, the statewide least tern population has also declined from 2005 numbers, to 6,826 in 2007. This included a 4.7% decline in the number of nesting pairs in the San Diego region as well as a 46% decline at the Los Angeles Harbor nesting site. However, other factors discussed above are believed to be related to the decline in the number of least tern nesting pairs at the LA Harbor, rather than factors affecting the overall statewide population (however, the least tern statewide population has leveled off after 2000, following an increase from 1990 to 1999 of over 100%, from 1,708 to 3,582, suggesting that such factors discussed in bullets 3 and 4 above may be affecting least tern nesting sites in other parts of the state).

The factors discussed above are unrelated to the proximity of the Los Angeles Harbor nesting site to industrial uses because (1) least terns have used the Los Angeles Harbor nesting site since 1997, (2) numbers of least tern nesting pairs increased (except for a decrease in 2002, when statewide numbers declined rapidly) from 80 in 1997 to 1,254 in 2005, and (3) the APM Container Terminal adjacent to the nesting site has been in

operation since 2002. Nesting increased at the Pier 400 nesting site as a result of active management, site preparation, and more consistent and effective predator management. However, nesting decreases have occurred due to several factors discussed in the bullets above, which are unrelated to the presence of industrial uses. In fact, several least tern nesting sites statewide thrive adjacent to industrial uses and high levels of human disturbance, including the Lindbergh Field nesting site at the San Diego airport, and the Huntington Beach nesting site adjacent to Pacific Coast Highway.

**USEPA-24.** The comment is noted. MM RISK-2.1c has been added as shown below:

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.

**USEPA-25.** The comment is generally in agreement with the noise impact analysis in the Draft SEIS/SEIR. The primary recommendation is for additional mitigation through the restriction of the hours of operation of louder equipment. Mitigation Measure MM NOISE-2 states: “In order to reduce the potential impact during construction, pile driving activities at Pier 400 would be limited to between the hours of 9:00 A.M and 5:00 P.M. on Monday-Friday and 10:00 A.M. to 4:00 P.M. Saturday.” The measure is restricted to pile driving because the significant noise impacts that exceed the threshold of 5 dB above ambient levels at sensitive receptors occur because of the high noise associated with pile driving. Implementation of MM NOISE-2 would achieve the desired limitation of the use of louder equipment after 6:00 P.M. on weekdays and 4:00 P.M. on Saturdays. No change is required to the document to clarify this issue. However, in reviewing this issue LAHD identified that the document contains a typographical error when describing the noise regulations of the City of Los Angeles Municipal Code, and has corrected that error (page 3.10-13 of the Draft SEIS/SEIR at line 5).



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
501 West Ocean Boulevard, Suite 4200  
Long Beach, California 90802- 4213

JUL 15 2008

U.S. Army Corps of Engineers  
Los Angeles District  
Regulatory Division  
ATTN: CESPL-RG-2004-00917-SDM  
P.O. Box 532711  
Los Angeles, California 90053-2325

Dear Colonel Magness:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the Draft Supplemental Environmental Impact Statement (SEIS) for the Port of Los Angeles's (POLA) Pacific L.A. Marine Terminal Pier 400, Berth 408 Project (Project). NMFS offers the following comments pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Marine Mammal and Protection Act (MMPA), and the Fish and Wildlife Coordination Act.

NMFS-1

### **Proposed Project**

The proposed Project would include construction and operation of a new marine terminal at Berth 408 on Pier 400 (Marine Terminal), new tank farm facilities with a total of 4.0 million barrels of capacity, and pipelines connecting the Marine Terminal and the tank farms to local refineries.

Steel and concrete piles would be required to support in-water components of the berth platform. At the current design stage it is not certain whether the mooring dolphins would require steel or pre-stressed concrete piles. If steel piles are used for the mooring dolphins, proposed Project components would require approximately 150 piles in water (110 steel and 40 concrete). If concrete piles are used for the mooring dolphins, proposed Project components would require approximately 258 piles in water (74 steel and 184 concrete). The concrete piles would be 24-inch diameter, and the steel piles would be a combination of 48-inch and 54-inch diameter.

### **Magnuson-Stevens Fishery Conservation and Management Act Comments**

NMFS-2

#### **Action Area**

The proposed project occurs in essential fish habitat (EFH) for various federally managed fish species within the Pacific Groundfish and Coastal Pelagics Fishery Management Plans (FMPs). In addition, the project occurs within estuarine habitat, which is considered a habitat area of particular concern (HAPC) for various federally managed



NMFS-2 fish species within the Pacific Groundfish FMP. HAPC are described in the regulations as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under MSA; however, federally permitted projects with potential adverse impacts to HAPC will be more carefully scrutinized during the consultation process.

NMFS-3 **Effects of the Action**

The construction activities associated with this project may generate significant underwater noise. For example, pile driving can generate intense underwater sound pressure waves that may adversely affect the ecological functioning of EFH. These pressure waves have been shown to injure and kill fish. Injuries associated directly with pile driving are poorly studied, but include rupture of the swimbladder and internal hemorrhaging. Sound pressure levels (SPL) 100 decibels (dB) above the threshold for hearing are thought to be sufficient to damage the auditory system in many fishes. Short-term exposure to peak SPL above 190 dB (re: 1  $\mu$ Pa) are thought to injure physical harm on fish. However, 155 dB (re: 1  $\mu$ Pa) may be sufficient to temporarily stun small fish. Of the reported fish kills associated with pile driving, all have occurred during use of an impact hammer on hollow steel piles. Of particular concern in this project is the driving of a large number of 48- to 54-inch steel piles. The SEIS concludes that sound pressure waves caused by the steel pile driving could affect fish near the piles with mortality of some individuals.

Potential impacts to EFH may also occur in the event of an accidental oil spill. If a project-related oil spill occurs and has the potential to enter the Pier 300 Shallow Water Habitat, booms are proposed to be deployed to prevent oil from entering this important habitat area.

NMFS-4 **EFH Conservation Recommendations**

As described in the above effects analysis, NMFS has determined that the proposed action would adversely affect EFH for various federally managed fish species within the Coastal Pelagics Species and the Pacific Coast Groundfish FMPs. Therefore, pursuant to section 305(b)(4)(A) of the MSA, NMFS offers the following EFH conservation recommendations to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH.

1. The POLA should utilize a vibratory hammer when driving the steel piles. If an impact hammer is required for reasons of seismic stability or substrate type, it is recommended that the steel piles be driven as deep as possible with a vibratory hammer prior to use of the impact hammer. Driving hollow steel piles with impact hammers produce intense, sharp spikes of sound which can easily reach levels that injure fish. Vibratory hammers, on the other hand, produce sounds of lower intensity, with a rapid repetition rate. Thus, utilizing a vibratory hammer will minimize the adverse effects to EFH associated with underwater noise.

- 2. The POLA should monitor peak SPLs during pile driving to ensure that they do not exceed the 190 dB re: 1 μPa threshold for injury to fish. Results from this monitoring along with any observed fish kills should be reported to NMFS.

↑  
NMFS-4

**Statutory Response Requirement**

NMFS-5

Please be advised that regulations at section 305(b)(4)(B) of the MSA and 50 CFR 600.920(k) of the MSA require your office to provide a written response to this letter within 30 days of its receipt and at least 10 days prior to final approval of the action. A preliminary response is acceptable if final action cannot be completed within 30 days. Your final response must include a description of measures to be required to avoid, mitigate, or offset the adverse impacts of the activity. If your response is inconsistent with our EFH conservation recommendations, you must provide an explanation of the reasons for not implementing those recommendations. The reasons must include the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects.

**Supplemental Consultation**

NMFS-6

Pursuant to 50 CFR 600.920(l), the Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations.

**Marine Mammal Protection Act Comments**

NMFS-7

Marine mammals likely to be in the immediate project area are the California sea lion (*Zalophus californianus*) and the Pacific harbor seal (*Phoca vitulina richardii*). These species are protected under the MMPA. See 16 U.S.C. § 1361 *et seq.* Under the MMPA, it is generally illegal to "take" a marine mammal without prior authorization from NMFS. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. Except with respect to military readiness activities and certain scientific research conducted by, or on behalf of, the Federal Government, "harassment" is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild, or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

The SEIS mentions possible impacts to marine mammals from underwater sound from pile-driving of steel piles. Specifically, the SEIS concludes that a few individual harbor seals could be affected, but the number would be low since few are present and the effect would be of short duration. NMFS recommends including more detailed information on possible impacts to marine mammals from underwater sound in the final EIS. Specifically, additional information related to underwater sound pressure levels

↓

NMFS-7 ↑ associated with construction and operation, the timing, and/or the duration of the activity should be provided.

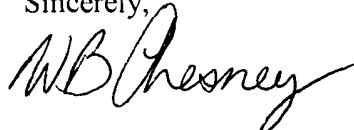
Sounds introduced into the sea by man-made devices could have a deleterious effect on marine mammals by causing stress or injury, interfering with communication and predator/prey detection, and changing behavior. Acoustic exposure to loud sounds, such as those produced by pile-driving activities, may result in a temporary or permanent loss of hearing (termed a temporary (TTS) or permanent (PTS) threshold shift) depending upon the location of the marine mammal in relation to the source of the sound.

NMFS is currently in the process of determining safety criteria (*i.e.*, guidelines) for marine species exposed to underwater sound. However, pending adoption of these guidelines we have preliminarily determined, based on past projects, consultations with experts, and published studies, that 180 dB re 1  $\mu\text{Pa}_{\text{RMS}}$  (190 dB re 1  $\mu\text{Pa}_{\text{RMS}}$  for pinnipeds) is the impulse sound pressure level that can be received by marine mammals without injury. Marine mammals have shown behavioral changes when exposed to impulse sound pressure levels of 160 dB re 1  $\mu\text{Pa}_{\text{RMS}}$ .

Based on the information provided in the SEIS, it may be necessary to receive authorization from NMFS under the MMPA for this proposed project. Most incidental take authorizations to date have involved the incidental harassment of marine mammals by noise.

NMFS-8 Thank you for consideration of our comments. If you have any questions regarding our EFH comments, please contact Mr. Bryant Chesney at 562-980-4037 or [Bryant.Chesney@noaa.gov](mailto:Bryant.Chesney@noaa.gov). For questions related to our MMPA comments, please contact Monica DeAngelis at 562-980-3232 or [Monica.DeAngelis@noaa.gov](mailto:Monica.DeAngelis@noaa.gov).

Sincerely,



for Robert S. Hoffman  
Assistant Regional Administrator  
for Habitat Conservation Division

**National Marine Fisheries Service, July 15, 2008**

- NMFS-1.** Thank you for your review of and comments on the Draft SEIS.
- NMFS-2.** The comment regarding consideration of estuarine habitat in the Outer Harbor as a habitat area of particular concern (HAPC) is noted.
- NMFS-3.** The comments are acknowledged as correct statements of potential effects of the action.
- NMFS-4.** The recommended conservation measures to maximize the use of vibratory hammers and to monitor underwater sound levels are acknowledged. Regarding the first conservation recommendation, vibratory hammers are best suited for sandy soils and are least suited for stiff (i.e., strong) clays. The substrate where piles would be driven for Berth 408 consists of stiff to hard clays and occasional thin layers (about 2 to 4 feet) of rock. Vibratory hammers are expected to meet refusal well ahead of the desired pile depths for the pile size used and anticipated loads. Regarding the second conservation recommendation, monitoring underwater noise is complex and costly. The Port and USACE understand that NMFS is pursuing a comprehensive study to evaluate noise levels and their effects on fish and marine mammals, which could include addressing this issue at a Port-wide level; the Port of Los Angeles is interested in working with NMFS and other interested agencies on such a study. Therefore, MM NOISE-1 has been amended as follows:

**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.

Note that the operation of the hammer at 40-60% energy level during the “soft start” of pile driving is expected to result in similar levels of noise reduction (40–60%)

underwater. Marine mammals are expected to voluntarily move away from the area upon commencement of the “soft start” of pile driving.

The above measure has also been added as a Biological Mitigation Measure, **MM BIO-1.1k**.

**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.

**NMFS-5.** The comment is noted regarding the statutory response requirement to respond in writing to NMFS regarding description of mitigation measures and/or justifications for inconsistencies with recommended conservation measures. The Corps is the Agency that responds to NMFS with regard to their Conservation Recommendations. A response regarding the Conservation Recommendations will be sent to the NMFS prior to authorization of the ROD

**NMFS-6.** The comment is noted. The project has not changed substantially in a manner that may adversely affect EFH, and no new information is available that would affect the basis of the NMFS comment letter.

**NMFS-7.** The document has been revised to include additional detailed information on potential impacts to marine mammals from underwater sound. Additional information has been added regarding underwater sound pressure levels during construction activities, and timing and duration of pile driving activities. NOAA’s interim noise guidelines with respect to injury and disturbance have been added to the document. In addition, the estimated effect of project operations on the underwater noise environment is evaluated.

Also, please see response to NMFS-4. MM NOISE-1 has been amended to include use of a soft start method for pile driving, which would be expected to reduce impacts on marine mammals because marine mammals are expected to voluntarily move away from the area upon commencement of the “soft start” of pile driving.

**NMFS-8.** Thank you again for your review of the Draft SEIS.



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REGULATORY BRANCH  
LOS ANGELES OFFICE

U.S. Department of Homeland Security  
FEMA Region IX  
1111 Broadway, Suite 1200  
Oakland, CA. 94607-4052



FEMA

August 11, 2008

Joshua Burnam  
U. S. Army Corps of Engineers  
Los Angeles District, Regulatory Branch and  
Los Angeles Harbor Department  
ATTN: CESPL-CO-R-2004-0-0917-JLB  
P. O. Box 532711  
Los Angeles, California 90053-2325

Dear Mr. Burnam:

This is in response to your request for comments on the Pacific L. A. Marine Terminal LLC Crude Oil Terminal Project Draft SEIS/SEIR.

FEMA-1

Please review the current effective Flood Insurance Rate Maps (FIRMs) for the City of Los Angeles (Community Number 060137), Map revised May 4, 1999 and County of Los Angeles (Community Number 065043), Map revised July 6, 1998. Please note that the City and County of Los Angeles, California are participants in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

FEMA-2

A summary of these NFIP floodplain management building requirements are as follows:

FEMA-3

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.
- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any *development* must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

Joshua Burnam  
Page 2  
August 11, 2008

FEMA-3

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.
- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at <http://www.fema.gov/business/nfip/forms.shtm>.

**Please Note:**

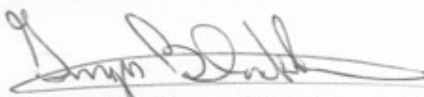
FEMA-4

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The [INSERT COMMUNITY NAME HERE] floodplain manager can be reached by calling [INSERT THE NAME] at [INSERT TELEPHONE NUMBER FOR THE COMMUNITY FLOODPLAIN MANAGER HERE]. The [INSERT COMMUNITY NAME HERE] floodplain manager can be reached by calling [INSERT THE NAME] at [INSERT TELEPHONE NUMBER FOR THE COMMUNITY FLOODPLAIN MANAGER HERE].

FEMA-5

If you have any questions or concerns, please do not hesitate to call Cynthia McKenzie of the Mitigation staff at (510) 627-7190.

Sincerely,



Gregor Blackburn, CFM, Branch Chief  
Floodplain Management and Insurance Branch

cc:

Dr. Ralph Appy, Director Environmental Management Division, Port of Los Angeles  
Rod Tashima, Floodplain Administrator, City of Los Angeles  
Rick Sun, P. E., Department of Public Works, Los Angeles County  
Garret Tam Sing/Salomon Miranda, State of California, Department of Public Works,  
Southern District  
Cynthia McKenzie, Floodplanner, CFM, DHS/FEMA Region IX  
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

**Federal Emergency Management Agency, August, 11, 2008**

- FEMA-1.** Thank you for your review of and comments on the Draft SEIS/SEIR.
- FEMA-2.** Facilities constructed for the proposed project would comply with all floodplain building requirements. Statements have been added to Chapter 2 and Appendix E.
- FEMA-3.** Comment noted. Please see response to comment FEMA-2.
- FEMA-4.** Comment noted. Please see response to comment FEMA-2.
- FEMA-5.** Thank you again for your review of the Draft SEIS/SEIR.



United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Pacific Southwest Region  
1111 Jackson Street, Suite 520  
Oakland, California 94607

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LOS ANGELES OFFICE

IN REPLY REFER TO:  
ER 08/591

*Hardcopy*

28 July 2008

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Regulatory Branch

U.S. Army Corps of Engineers  
Los Angeles District  
Attn: Regulatory Division (Spencer MacNeil)  
P.O. Box 532711  
Los Angeles, CA 90053-2325

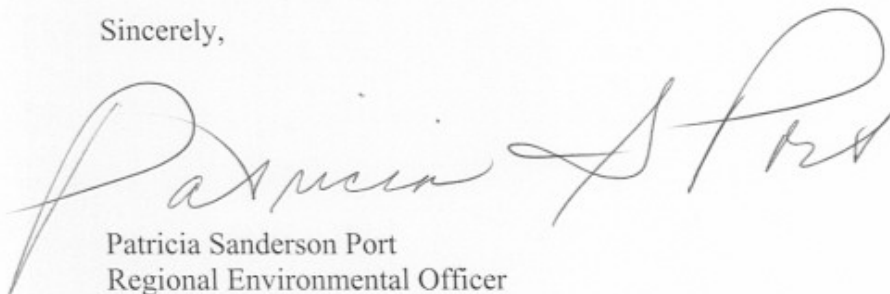
Subject: Review of the Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR), for the Pacific L.A. Marine Terminal LLC Crude Oil Terminal Project, Los Angeles County, CA

Dear Spencer MacNeil:

The Department of the Interior has received and reviewed the subject document and has no | DOI-1  
comments to offer.

Thank you for the opportunity to review this project.

Sincerely,



Patricia Sanderson Port  
Regional Environmental Officer

cc:  
Director, OEPC

DATE 07/28/08

ENVIRONMENTAL AFFAIRS WORKSHEET

ORIG \_\_\_\_\_  
ORIGLOC \_\_\_\_\_  
ORIGNO \_\_\_\_\_  
TITLE \_\_\_\_\_

REV NO 08 1591  
REV TYPE \_\_\_\_\_  
PRIORITY \_\_\_\_\_

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REV 1-10	REVDATE	REV 11-20	REVDATE
FWS	<u>11/11/11</u>	-----	<u>07/29/08</u>
NPS	<u>  /  /  </u>	-----	<u>  /  /  </u>
BLM	<u>  /  /  </u>	-----	<u>  /  /  </u>
MMS	<u>  /  /  </u>	-----	<u>  /  /  </u>
OSM	<u>  /  /  </u>	-----	<u>  /  /  </u>
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SCHRESP   /  /  

SIG REO OAK  
SIGDATE 07/28/08

POS \_\_\_\_\_  
CEQ \_\_\_\_\_  
FINRPT \_\_\_\_\_

**Department of Interior, July 28, 2008**

**DOI-1.** Thank you for your review of the Draft SEIS/SEIR.