



South Coast Air Quality Management District  
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**E-MAILED: December 2, 2008**

December 5, 2008

Dr. Spencer D. MacNeil, Commander  
U.S. Army Corps of Engineers, Los Angeles District  
Regulatory Division, Ventura Field Office  
2151 Alessandro Drive, Suite 110  
Ventura, CA 93001

Dr. Ralph G. Appy, Director of Environmental Management  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Dear Dr. MacNeil and Dr. Appy:

**Draft Environmental Impact Statement/Environmental Impact Report  
(DEIS/EIR) for the San Pedro Waterfront Project**

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final Environmental Impact Statement/Report.

The SCAQMD staff acknowledges the efforts of the Lead Agency to incorporate many of the Clean Air Action Plan (CAAP) control measures to reduce project emissions. Due to the level of significance still remaining after full implementation of the proposed mitigation measures, the SCAQMD staff is concerned that the proposed mitigation measures are not consistent with the measures proposed for other POLA terminal expansion projects (e.g., TraPac, China Shipping) because the measures don't go as far, or are not implemented as fast as the other terminal expansion projects. To address this, SCAQMD staff recommends that the mitigation measures for cruise vessel AMP, low sulfur fuel, and vessel speed reduction be accelerated. These and other recommendations are discussed in more detail in Attachment I.

Pursuant to Public Resources Code Section 21092.5, please provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final Environmental Impact Statement/Report. The SCAQMD staff would be happy to work with the Lead Agency to address these issues and any other questions that may arise. Please contact me at (909) 396-3105, if you have any questions regarding these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Susan Nakamura", with a long horizontal flourish extending to the right.

Susan Nakamura  
Planning Manager

Attachment

**Attachment I**  
**Comments on the DEIS/EIR for the**  
**San Pedro Waterfront Project**

The following includes more detailed and specific comments on the proposed San Pedro Waterfront Project.

***Mitigation Measures***

***MM AQ-1: Harbor Craft used during Construction***

MM AQ-1 proposes that all harbor craft used during construction shall be at a minimum repowered to meet the cleanest existing marine engine emission standards, or USEPA Tier 2, or where available USEPA Tier 3, unless circumstances exist which prevent the cleanest marine engine from being used. This mitigation measure should rely on the cleanest feasible technologies which become available during the construction phase of the proposed project. To the extent feasible, SCAQMD staff recommends that harbor craft engines meeting the proposed U.S. EPA Tier 4 marine engine standards be used when they become available.

***MM AQ-3: Fleet Modernization for On-road Trucks***

MM AQ-3 requires that all on-road heavy-duty diesel trucks used during construction shall comply with EPA 2004 on-road PM emission standards and be the cleanest available with respect to NOx. In addition, all on-road trucks shall be equipped with a CARB verified diesel emission reduction control strategy (VDECS) that will achieve Level 3 diesel emission reductions during construction. SCAQMD staff urges the lead agency to require as part of this mitigation measure, use of the cleanest available trucks, prior to 2011. Specifically, trucks used during construction should operate on engines with the lowest certified NOx emissions levels, but must meet at a minimum the 2007 NOx emission standards. It is also recommended that these requirements apply during circumstances where a piece of compliant equipment is on order and becomes available during the timeframe of construction.

***MM AQ-4: Fleet Modernization for Construction Equipment***

MM AQ-4 requires that prior to 2011, all off-road diesel-powered construction equipment greater than 50 horsepower meet Tier 2 non-road emission standards with CARB certified Best Available Control Technology (BACT) that will achieve Level 2 or 3 emission reductions. This mitigation measure does not represent the cleanest technology available since Tier 3 certified construction equipment has been available since 2006. SCAQMD staff recommends that MM AQ-4 be revised to require all construction equipment to meet the cleanest off-road engine emission standard available, but at a minimum equipment meeting the Tier 3 NOx emission standards, and be equipped with Level 2 or 3 CARB verified diesel emission control technology.

MM AQ-4 also requires between 2010 and 2012, all off-road diesel-powered construction equipment greater than 50 horsepower meet Tier 3 non-road emission standards with CARB certified BACT. However, Tier 4 construction equipment may be available sooner for certain engine models, and SCAQMD staff recommends all construction equipment be required to meet the cleanest off-road engine emission standard in the event Tier 4 standard engines become available. It is also recommended that these requirements apply during circumstances where a

piece of compliant equipment is on order and becomes available during the timeframe of construction.

*MM AQ-5: Additional Fugitive Dust Controls*

MM AQ-5 requires the construction contractor to comply with SCAQMD Rule 403 by reducing fugitive dust emissions to 90 percent from uncontrolled levels. Based on control efficiencies from the Western Regional Air Partnership (WRAP) Fugitive Dust Handbook (September 2006), the more appropriate control efficiency of 61 percent to estimate mitigated fugitive dust impacts from soil disturbance is a typical assumption. However, if 90 percent control efficiency is achievable by the lead agencies, the Final SEIS/SEIR should specify those measures and quantify the effects of the control measures to demonstrate the control efficiencies of those measures.

In addition, SCAQMD staff recommends the following additions to MM AQ-5:

- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation;
- Sweep all streets at least once a day using SCAQMD Rule 1186, 1186.1 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water);
- Apply water three times daily, or non-toxic soil stabilizer according to manufacturers' specification, to all unpaved parking or staging areas or unpaved road surfaces;
- Pave roads and shoulders; and
- Apply water three times daily or as needed to areas where soil is disturbed.

*MM AQ-6 Best Management Practices (BMPs)*

MM AQ-6 requires the use four BMP measures on construction equipment, such as diesel oxidation catalysts and diesel particulate traps; maintaining equipment to manufacturers' specifications; restricting idling to a maximum of 5 minutes when not in use; and installing high-pressure fuel injectors. SCAQMD staff recommends that the lead agencies consider adding the following additional BMP measures to further reduce construction air quality impacts from the project, if applicable and feasible:

- Use electricity from power poles rather than temporary diesel or gasoline power generators;
- Provide temporary traffic controls such as flag person, during all phases of construction to maintain smooth traffic flow;
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hour to the extent possible;
- Reroute construction trucks away from congested street or sensitive receptor areas;
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site;
- Configure construction parking to minimize traffic interference;
- Improve signal flow by traffic synchronization;
- All vehicles and equipment will be properly tuned and maintained according to manufacturer' specifications; and
- If all roads are not paved according to the MM AQ-5 SCAQMD staff recommendation, traffic speeds on all unpaved roads to be reduced to 15 mph or less.

*MM AQ-9: Alternative Maritime Power (AMP) for Cruise Vessels*

MM AQ-9 requires Inner Harbor cruise vessels to AMP while hoteling for 30% of all calls in 2009 and 80% of all calls in 2013 and thereafter. In addition, this mitigation measure requires cruise ships calling at the Outer Harbor to AMP 97% of all calls in 2013 and thereafter. SCAQMD staff is concerned that the 2013 AMP requirement for the inner Harbor Cruise Terminal is not consistent with the AMP requirement for other POLA projects such as the TraPac and China Shipping Terminal expansions. Both the TraPac and China Shipping Terminal expansion projects required 100% of vessels use AMP while hoteling. During preliminary discussions with Port staff, it was SCAQMD staff's understanding that a 100% AMP requirement for all cruise vessels was the proposed project's goal, however, due to certain instances where cruise vessels that would typically not call at the terminals would arrive such as the Queen Mary 2. The AMP requirement of 80% of all calls in 2013 and thereafter at the Inner Harbor Cruise Terminal is inconsistent with the AMP requirement at the Outer Harbor Cruise Terminal and all previously proposed container terminal projects. Due to the fact that the AMP requirement of 80% of all calls in 2013 and thereafter at the Inner Harbor Cruise Terminal was left out in the air quality analysis, the SCAQMD staff is concerned about the potential lack of commitment to implement this mitigation measure by the Lead Agency. SCAQMD staff recommends that the mitigation measure be consistent with other POLA expansion projects and require AMP for 100% of all calls in 2013 and thereafter for the Inner Harbor Cruise Terminal.

*MM AQ-10: Low-Sulfur Fuel*

MM AQ-10 requires use of low sulfur (<0.2 percent sulfur) marine fuel in all cruise ship engines calling at the Inner and Outer Harbor Cruise Terminals upon commencement of project operation. However, SCAQMD staff has noted that annual participation rates assumed in the air quality analysis for the Inner Harbor Cruise Terminal were 30% of calls in 2009 and 90% of calls in 2013 and thereafter. In addition the annual participation rate that was assumed in the air quality analysis for the Outer Harbor Cruise Terminal was 90% of calls in 2013.

SCAQMD staff recommends the Lead Agency commit to use low sulfur (<0.2 percent sulfur) marine fuel in all (100%) cruise ships calling at the Inner and Outer Harbor Cruise Terminal upon commencement of project operations with exceptions as indicated in the DEIS/EIR. The Lead Agency should also require those cruise vessels requiring tank retrofits to be retrofitted to use low sulfur fuel within 6 months of calling at the Port. In addition, SCAQMD staff recommends the Lead Agency require as part of this mitigation measure the use of 0.1 percent sulfur marine fuel in all cruise vessels calling at the Inner and Outer Harbor Cruise Terminals by 2012 in order to be consistent with CARB's Low Sulfur Fuel in Ocean-Going Vessels regulation. Reducing fuel sulfur is one of the most significant and feasible means of expeditiously reducing particulate and sulfur oxides emissions from the San Pedro Waterfront Project. The SCAQMD staff is concerned about the potential lack of commitment to implement this mitigation measure by the Lead Agency in only assuming in the air quality analysis 30% of all calls in 2009 and 90% in 2013 using 0.2 percent low-sulfur fuel.

*MM AQ-11: Vessel Speed-Reduction Program*

MM AQ-11 requires 30% of ship calls at the Inner Harbor Cruise Terminal to comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area by 2009. In addition, this mitigation measure requires 100% of ship calls at the Inner and Outer

Harbor Cruise Terminal to comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area by 2013 and thereafter. SCAQMD staff recommends accelerating the commitment date to 100% of all calls by 2009 for both the Inner and Outer Harbor Cruise Terminals to be consistent with CAAP Measure OGV-1 (requires 100% if OGVs by 2008) and the CARB SIP strategy (100% compliance with VSR Program out to 40 nm starting 2008/2009).

*MM AQ-12: New Vessel Builds*

This mitigation measure lacks commitments that are specific or enforceable. SCAQMD staff urges inclusion of language in the mitigation measure requiring new vessel builds for the Inner and Outer Harbor Cruise Terminals to meet at a minimum the SIP requirement for main engine controls for new vessel builds. The SIP assumes that new and existing vessels will utilize a combination of advanced control technologies to achieve fleet average emission reductions of 30% for NOx and particulates by 2014, and a 70% reduction of NOx and 50% reduction of particulates by 2023.

The relative feasibility of installing advanced control in new builds as discussed below underscores the importance of acting immediately to establish control requirements for new vessels in the proposed Inner and Outer Harbor Cruise Terminals.

Slide valves and other control technologies could be used in combination to obtain higher control rates, and can be retrofitted to existing vessels. These additional control technologies can feasibly be applied to ship main engines and should be required by the project approval. Below is a table listing feasible measures with the associated emission reduction estimates compiled by SCAQMD staff.

**List of Feasible Controls**

Control	Control Details	Estimated Emission Reductions		
		PM	NO <sub>x</sub>	Other
SCR and DOC	Selective Catalytic Reduction with Urea Injection and Diesel Oxidation Catalyst	25-50%	90%	90% CO
Engine Optimization	Slide Valves, Injection Timing Delay	20-30%	30%	N/A
Exhaust Gas Water Treatment	Exhaust Gas Mixes with Sea Water	80%	N/A	70-90% SO <sub>2</sub>
Water Injection	Humidification of Fuel-Air Mixture	10-20%	20-40%	N/A

Slide valves that provide a 30 percent reduction in NOx emissions and 20-30% reduction in PM emissions are available from Mann, one of the leading marine engine manufacturers. These slide valves have been installed on several ocean-going vessels and are being demonstrated as part of a joint effort with the California Air Resources Board (CARB). Water injection, emulsified fuels, or humid air are established technologies in use in Europe. In addition, SCR is a mature technology in use on a wide variety of sources including marine vessels. It has not to the

SCAQMD staff's knowledge been applied to a large marine vessel. However, based on SCAQMD staff visits to European marine vessel operators, such an application is feasible and merely a matter of appropriate engineering. Utilization of the control device could be limited to areas adjacent to the coast. Space constraints would be an issue, thus making installation most feasible in new builds, but SCR may be retrofitted if space issues are addressed.

Many of the above retrofit technologies are summarized in a report by Lovblad and Fridell (2006). The report can be found at [www.profu.se](http://www.profu.se) or can be obtained from SCAQMD staff.

There are currently an extraordinary number of vessels on order to be constructed. Once those vessels are built and in the water, the technical and economic challenges to control them will be much greater. The Port has eluded to the fact that MM AQ-22 (Periodic Review of New Technology and Regulations) as a "back-up" measure to MM AQ-12 in re-opening the lease agreements to require feasible advanced control technologies in the future. However, SCAQMD staff is concerned that MM AQ-22 waits until a mutual agreement on operational feasibility and cost sharing to occur prior to requiring advanced controls. Reductions from advanced controls on new vessel builds are feasible now and needed to ensure consistency with the adopted air quality plans to meet federal attainment deadlines.

The feasibility of using advanced controls on marine vessel engines, including main engines, is supported by the recent proposal by the Marine Environmental Protection Committee of the International Maritime Organization to establish increasingly stringent marine vessel emissions limits. These proposed limits include a requirement that new vessels built after January 2016 and operated in Emission Control Areas control NOx emissions by 80% beyond pre-existing standards. Approximately 100 nations agreed to propose these limits. The limits are similar to those in a proposal made by the United States government that was supported by the World Shipping Council – an industry organization made up of carriers of over 90% of containerized cargo. Under these circumstances, the failure of the San Pedro Waterfront Project DEIS/EIR to include emissions standards that are at least as stringent as those proposed at IMO is a failure to include all feasible mitigation measures. Indeed, we believe that, given that the proposed IMO standards are based on existing technologies, the San Pedro Waterfront Project EIR can and should accelerate implementation of such standards sufficiently for the emission reductions assumed in the SIP to be achieved.

#### *MM AQ-18: Engine Standards for Tugboats*

MM AQ-18 requires 100% of tugboats calling at the North Harbor Cut in 2014 and 2020 to be repowered to meet U.S. EPA Tier 2 and U.S. EPA Tier 3 marine engine emission standards, respectively. This mitigation measure is inconsistent with San Pedro Bay Ports Clean Air Action Plan measure HC-1: Performance Standards for Harbor Craft and may not meet the CARB Harbor Craft Regulation. SCAQMD staff recommends all tugboats calling at the North Harbor cut meet U.S. EPA Tier 2 marine engine emission standards upon commencement of project operation and meet U.S. EPA Tier 3 marine engine emission standards by 2014. This mitigation measure should rely on the cleanest feasible technologies. SCAQMD staff recommends that harbor craft engines meeting the proposed U.S. EPA Tier 4 marine engine standards be used when they become available.

*MM AQ-21: Catalina Express Ferry Engine Standards*

MM AQ-21 requires ferries calling at the Catalina Express Terminal to be 100% repowered to meet the U.S. EPA Tier 2 marine engine emissions standards by 2014. This mitigation measure is inconsistent with San Pedro Bay Ports Clean Air Action Plan measure HC-1: Performance Standards for Harbor Craft and may not meet the CARB Harbor Craft Regulation. SCAQMD staff recommends all ferries calling at the Catalina Express Terminal to meet U.S. EPA Tier 2 marine engine emission standards upon commencement of project operation and meet U.S. EPA Tier 3 marine engine emission standards by 2014. This mitigation measure should rely on the cleanest feasible technologies. To the extent feasible, SCAQMD staff recommends that harbor craft engines meeting the proposed U.S. EPA Tier 4 marine engine standards be used when they become available.

*Air Quality Analysis*

*Catalina Express.* Page 2-38, line 18 of the DEIS/EIR provides a description of the proposed project element of relocating the Catalina Express Terminal berthing facilities from Berths 95-96 to the existing location of the S.S. Lane Victory at Berth 94. However, no information is provided regarding the Catalina Express ferry operations and assumptions used in regards to future operational growth. SCAQMD staff recommends the Lead Agency provide additional information such as the total of amount of ferry vessels, ferry trips, idling time, and future operational growth that is assumed in the air quality emissions analysis for the proposed relocated Catalina Express Terminal.

*Cruise Ship Operations.* Page 2-29, line 36 of the DEIS/EIR references a 2006 Port of Los Angeles Cruise Study by Bermello Ajamil & Partners showing an increase in cruise ship operations. The DEIS/EIR indicates that the study results were used to determine the project throughput assumptions in calculating the project emissions. The 2006 project CEQA baseline of 258 annual cruise ships is consistent with the study results. However, the proposed project annual cruise ship calls for years 2015 (275 ship calls) and 2037 (287 ship calls) is inconsistent with the findings in the cruise ship study. The Executive Summary of the cruise ship study found on the Port's website states that "...cruise vessel calls would climb from 258 to nearly 400 calls by 2020."<sup>1</sup> SCAQMD staff recommends the Lead Agency use the appropriate growth numbers found in the 2006 Port of Los Angeles Cruise Study in the Final DEIS/EIR air quality analysis.

*Baseline Assumptions.* Page 3.2-15, line 10 of the DEIS/EIR states as part of the baseline emissions calculations, it was assumed that fifty-nine percent of cruise ships complied with the Vessel Speed Reduction Program (VSRP) to 20 nautical miles (nm). However, according to Page 3.2-39, line 4 states that VSRP compliance rate assumptions in the 2006 baseline would be 80% to 20 nautical miles, without mitigation. Please clarify the actual assumption used for the VSRP compliance rate for cruise ships in the Final DEIS/EIR.

*Cruise Ship Assumptions.* Page 3.2-39, line 13 of the DEIS/EIR states that most cruise ships would proceed directly to the berth and would not spend time in anchorage. Please clarify in the Final DEIS/EIR the reason for anchorage, the annual percentage that would anchor, the amount

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<sup>1</sup> "2006 Port of Los Angeles Cruise Study," Draft Executive Summary, July 2006.  
[http://www.portoflosangeles.org/DOC/REPORT\\_Cruise\\_Study\\_2006\\_Executive\\_Summary.pdf](http://www.portoflosangeles.org/DOC/REPORT_Cruise_Study_2006_Executive_Summary.pdf)



of time a cruise ship would anchor prior to proceeding to berth, and if the hoteling duration assumption of 12 hours includes the anchorage time for the cruise vessels. If anchorage does occur, SCAQMD staff recommends including it in the analysis.

*Construction Tugboat Assumptions.* Page 3.2-35, line 27 of the DEIS/EIR states that “During dredging activities, a tugboat would operate at 8 hours per day hauling a barge off site for sediment disposal at sea. The round-trip distance would be 2 nm.” However, Figure 3.2-3 (Tugboat Construction Haul Route) shows the route to LA-2 Disposal Site to be approximately 18 miles roundtrip or roughly 15.65 nautical miles, based on the map scale. SCAQMD staff recommends the Lead Agency correct the construction tugboat assumption discrepancy in the Final EIS/EIR.

*Water Taxi Emissions.* Page 3.2-40, line 2 of the DEIS/EIR provides assumptions on Tugboats, Catalina Express, and other Harbor Craft. However, no assumptions are made in the air quality analysis on water taxi service described in the Project Description section (Figure 2-6a and Page 2-21 line 24) of the DEIS/EIR. SCAQMD staff recommends that the Lead Agency provide all air quality analysis assumptions regarding the planned water taxi service. Furthermore, if U.S. Water Taxi service located near Warehouse No. 1 at Berth 60 is part of the project description, those emissions should also be analyzed in the Final EIS/EIR.

*Crowley and Millenium Tugboat Transit Distance Assumptions.* Page 3.2-70, line 30 of the DEIS/EIR states that “...the Crowley and Millenium tugboats would be relocated to the North Harbor, thereby reducing their transit distance to Angels Gate.” SCAQMD staff is concerned that the transit distance to Angels Gate is not reduced as indicated by the DEIS/EIR. Based on information found in the DEIS/EIR, the Port’s website, and the Los Angeles & Long Beach Harbors Automobile of Southern California Map, Crowley Tugboat operations are currently located at Berths 86 and 74, which is closer in proximity to Angels gate than the proposed North Harbor Cut. SCAQMD staff recommends the lead agency correct this assumption in the Final EIS/EIR air quality analysis. In addition, SCAQMD staff recommends including any additional tugboat operations that would occupy the proposed North Harbor Cut in the Final EIS/EIR air quality analysis and any growth assumptions for future years, such as increasing fleet size.

*Peak Daily Truck Trips Assumptions.* Page 3.2-70, line 36 of the DEIS/EIR provides a breakdown of peak daily truck trips to the cruise terminals, Ports O’Call, and other small proposed project sites for 2011, 2015, and 2022, and 2037 without additional explanation of the source and how this was determined. SCAQMD staff recommends a clear breakdown of the peak daily truck trips by Port destination, how the truck trips were determined, truck trip distances, and any references in the Final EIS/EIR.

*Health Risk Assessment.* The Health Risk Assessment (HRA) of the DEIS/EIR did not include a figure showing the locations of the sources modeled. Since there were two meteorological stations used to simulate the Inner and Outer Harbor conditions, this additional figure will also be helpful in determining the appropriate meteorological station data to use for the dispersion modeling. SCAQMD staff recommends the Lead Agency provide this additional figure showing the location of the sources modeled in the Final EIS/EIR.

In reviewing Table D2.3-2 of Appendix D2 and Table D3.4-1 of Appendix D3, no explanation or justification was provided as to why the sigma z (initial vertical dimension) was calculated using twice the plume rise increments as compared to the vertical dimension. SCAQMD staff recommends the Lead Agency provide an explanation or justification in the Final EIS/EIR.

The AERMOD electronic files of the DEIS/EIR indicated that only the Type 3 vessel was modeled at the Outer Harbor. However, Table D2.3-2 of Appendix D2 and Table D3.4-1 of Appendix D3, indicates that all three vessel types will be utilizing the Outer Harbor. SCAQMD staff recommends the Lead Agency correct this discrepancy and analysis accordingly, in the Final EIS/EIR.

In the California Air Resources Board's (CARB) Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach (DPM Study), dated April 2006, a release height of 4 meters was used for heavy duty trucks. However, a release height of 15 feet or 4.6 meters was used for heavy duty trucks in the proposed projects DEIS/EIR dispersion modeling (Appendix D2, Table D2.3-2) and HRA (Appendix D3, Table 3.4-1). SCAQMD staff recommends the Lead Agency provide justification in the Final EIS/EIR regarding the difference in release heights for heavy duty trucks, when comparing the proposed project to the CARB DPM Study for the Ports.