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Dr. Ralph G. Appy and Dr. Aaron Allen
U.S. Army Corps of Engineers, Los Angeles District
Regulatory Branch and the Los Angeles Harbor Department
ATTN: CESPL-CO-R-2003-01029-AOA
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Dr. Appy and Dr. Allen:

Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Berth 97-109 Container Terminal Project (China Shipping)

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff would like thank the lead agency for granting an additional week to review the Draft EIS/EIR to account for data that was received after the comment period began. As you are aware, the proposed China Shipping Project is the first major project proposed following release of the Port of Los Angeles and the Port of Long Beach's draft Clean Air Action Plan (CAAP), and is expected to be followed by future projects at the two ports. To achieve the goals of the draft CAAP and regional air quality goals, it is imperative that air pollution impacts be appropriately quantified and communicated, and that the project include all feasible measures to mitigate air quality and public health impacts. This is particularly important since the proposed project is in a non-attainment area, adjacent to already-impacted residential communities and several schools.

The SCAQMD staff's comments on the draft EIS/EIR are summarized below. Detailed comments are provided in Attachment I. In general, our staff has concerns regarding some of the assumptions underlying the air quality analysis, conclusions of the health risk assessment, and sufficiency of mitigation measures.

Baseline Emissions. The state CEQA guidelines define the environmental setting as the *actual physical condition* of the environment in the vicinity of the project as they exist at the time of the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced. (CEQA Guidelines 14 Cal. Code. Regs. § 15125(a).) California courts have consistently applied the "actual physical conditions" requirement to determine a project's environmental baseline. (See

County of Amador v. El Dorado County Water Agency, 76 Cal. App. 4th 931, 955 (1999); City of Carmel-by-the-Sea v. County of Monterey, 183 Cal. App. 3d 229, 246-247 (1986); and Environmental Planning & Information Council v. County of El Dorado, 131 Cal. App. 3d 350, 354 (1982).) Further, courts have "widely accepted" the principal that "the significance of a project's impacts cannot be measured unless the EIR first established the actual physical conditions [i.e. the baseline] on the property." (Save Our Peninsula Committee v. Monterey County Board of Supervisors, 87 Cal. App. 4th 99, 125 (2001).)

With respect to the Berths 97-109 Container Terminal Project DEIR/EIS, the project's baseline emissions used in the air quality and meteorology assessment are not based upon "actual physical conditions" at the project site, but are instead based on assumptions of greater activity. This does not fully describe or communicate the impact of the project.

The DEIR/EIS states that "baseline emissions attributed to the Berth 97-109 Terminal, prior to Phase I of the proposed Project construction, represent the emissions associated with containers that moved through the Berth 97-109 backlands, *even though they arrived and departed on ships that called at the Berth 121-131 Terminal.*" (DEIR/EIS at 3.2-8 (emphasis added).) Further, these sources of emissions include a "prorated" percentage of the transport and hoteling of container ships, as well as tugboat assistance to the container ships, that called on Berths 121-131, but are being "attributed" to Berths 97-109. Id. This equates to the emissions associated with 23 ship calls being included in the project's baseline.

Pursuant to an Amended Stipulated Judgment relating to this project, the environmental baseline for determining the impacts of the Berths 97-109 Container Terminal Project is the physical conditions as they existed in March 2001. The DEIR/EIS states that it is appropriate to assign a percentage of the ship calls at Berths 121-131 to the project site because emissions from 23 ship calls "are directly related to the containers being stored and moved on the backlands of the Berths 97-109 Terminal." However, in March 2001 the project site was being used only for the temporary storage of containers; no ships actually called upon Berths 97-109. The DEIR/EIS does not demonstrate that the 23 ship calls are solely attributed to Berths 97-109. Indeed, the DEIR/EIS indicates that both Berths 97-109 and Berths 121-131 will operate simultaneously and the DEIR/EIS does not suggest that there will be a decrease in ship calls at Berth 121-131.

If the baseline emissions did not include the ship calls from Berths 121-131, it is likely that the cancer risk from the proposed project would be higher. The District, therefore, requests that the HRA be revised to include the appropriate baseline. Please note that CEQA Guidelines would require recirculation if a new significant environmental impact would result from the proposed project or from a new mitigation measure proposed to be implemented or a substantial increase in the severity of an impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

Significance Threshold. The SCAQMD staff recommends that the lead agency conclude the health risk from the proposed project be determined to be significant since the occupational health risk is 22 in one million, which exceeds the SCAQMD significance threshold of 10 in one million. The SCAQMD staff is concerned that the DEIR/EIS did not use the SCAQMD's thresholds of significance for toxic air contaminants. For carcinogenic health impacts, the SCAQMD considers impacts to be significant if the incremental maximum individual cancer risk is greater than or equal to 10 in one million. For non-carcinogenic health impacts, the SCAQMD considers impacts to be significant if incremental hazard index is greater than or equal to one. The maximum individual cancer risk or MICR is the highest of either the maximum exposed individual resident or the maximum exposed individual worker. Occupational exposures are calculated utilizing shorter exposure assumptions (40 versus 70 years).

Peak Daily Emissions: When analyzing impacts from both construction and operation, SCAQMD guidance is to calculate peak daily impacts for a project. This concept is consistent with CEQA guidance to analyze the severity of impacts (Remy and Thomas, et al. 1999). By analyzing peak daily impacts, this affords the public with information on the maximum potential impacts that could affect residents living in the vicinity of the project and provides full disclosure to the public regarding impacts from a project, which is one of the basic tenets of CEQA.

The SCAQMD staff believes that the DEIR/EIS underestimated peak daily emissions from the proposed project, particularly for container ships and tug boats. Based on footnote (a) in Table 3.2-16, "emissions from ships, tugboats, and trains represent average daily emissions assuming 365 days per year of operations." Thus, based on Tables 33 and 34 in Appendix E1 – Criteria Pollutant Emissions Calculations, for ship emissions, the annual emissions were divided by 365 days. The SCAQMD staff is believes that this methodology would not capture the impact of even one ship call and the associated tug boat emissions since in 2030 there are an estimated 234 ship calls per year. Moreover, the approach used in the DEIR/EIS averages all container ships with an assumed sulfur content in the fuel of 2.7 percent thus does not capture the peak daily emissions from the largest ship burning higher sulfur content fuel.

On page 3.2-24, the DEIR/EIS acknowledges that with regards to emissions from ship main engines, auxiliary engines, and boilers it is conceivable that "...two ships, both burning 4.5 percent fuel, could call on a given day at the terminal on the same day." In addition, in Appendix E3, page, 9 regarding a worst-case hourly activity scenario it was assumed during a single hour, "one ship is hoteling while a second ship is harbor transiting, turning, and docking with assistance from two tugboats during the same hour, or two ships are hoteling at adjacent berths during the same hour." The SCAQMD staff recommends that the lead agency recalculate the daily emissions associated with operation of Berth 97-109 to reflect a scenario accounting for two ships transiting and/or hoteling and an assumption of the high end of expected sulfur content in the fuel.

Significance and Mitigation Measures. At full implementation, the proposed project is expected to result in 1,551,000 TEUs, 234 ship calls, 3,720 daily truck movements, and 950 rail movements. After mitigation, the proposed project is expected to be regionally significant based on VOC, CO, and NOx emissions, and have significant public health impacts as the worker exposure is 22 in one million, which is greater than the SCAQMD's threshold of significance of 10 in a million. Moreover, the SCAQMD staff believes that the estimated emissions and health risk are higher than estimated in the DEIR/EIS as the baseline emissions should not include ship calls and associated tug boat emissions that are associated with Berth 121-131.

The SCAQMD has reviewed the mitigation measures in the DEIR/EIS and believes that the DEIR/EIS has not considered all feasible mitigation measures as required pursuant to CEQA Guidelines §15126.4. Between 2005 and 2030, the DEIR/EIS shows that NOx emissions from trains will increase 512 to 968 pounds per day, and NOx emissions from tug boats will increase from 27 to 46 pounds per day. The DEIR/EIS, however, did not consider any mitigation measures for tug boats or trains. The SCAQMD staff believes that mitigation measures should at a minimum be as stringent as the measures in the draft CAAP, and in some situations the SCAQMD staff is recommending that additional measures be considered and existing mitigation measures be strengthened. Please refer to Attachment I for details regarding mitigation measures.

As you know, the draft CAAP proposes that certain advanced control measures, such as seawater scrubbing for vessel main engines, be more fully developed through a "Technology Advancement Program." Due to the significance of project NOx and toxics impacts, it is important that the project incorporate all advanced control measures as soon as possible. Because the project approval would involve granting of a long-term lease (possibly in excess of thirty years), and because a primary method of requiring the project operator to implement control measures would be through conditions of lease or project approval, a legal mechanism and commitment needs to be established so that the lead agency could and would require advanced controls after project approval. Alternatively the project approval should require a long-term level of control commensurate with broad implementation of the most effective advanced aftertreatment technologies for marine vessel main and auxiliary engines, locomotives and other equipment. The feasible level of control for aftertreatment technologies such as SCR controls (which, during the project life, are feasible for marine vessel main and auxiliary engines, and locomotives), and DPFs (which, during the project life, are feasible for locomotives) have been demonstrated in a variety of applications to be approximately 90%. To ensure implementation of all feasible mitigations, a date certain for achieving such level of control based on broad implementation of these technologies should be established. Feasible schedules are included in the draft 2007 revision to the *South Coast Air Quality Management Plan.*

Finally, if projected emissions after application of all feasible mitigation to equipment associated with the project still create significant air quality impacts, additional mitigation measures should be applied to control sources, as close to the project as feasible. One means of accomplishing this would be through a mitigation fee that would

be used to implement emission reduction projects, again these projects should be as close to the proposed China Shipping project. The SCAQMD staff would like to work with the Lead Agency and is available to provide any needed assistance to develop a mitigation fee or alternate program to ensure that all feasible measures are implemented such that criteria pollutant emissions are reduced to a level of insignificance, and to reduce toxics impacts to the maximum extent feasible.

The SCAQMD staff appreciates the opportunity to comment on this project. If you have any questions, please call me at (909) 396-3105.

Sincerely,

Susan Nakamura
Planning Manager

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Control Number

Attachment I
Additional Comments on the DEIR/EIS for Berth 97-109 Container Terminal Project (China Shipping)

Line-Haul Emission Factors. Page 3.2-27 of the DEIR/EIS states that line-haul locomotive emissions were adjusted to Tier 2 emission factors starting in 2010 to account for implementation of the 1998 South Coast Locomotive Emissions Agreement. This requirement in the 1998 Agreement allows the railroads to demonstrate, on average, that their locomotive fleet of line-hauls and switchers would meet a Tier 2 emission factor. Because the technology for switch locomotives is advancing faster than technologies for line-haul locomotives, and railroads are purchasing switch locomotives that improve on Tier 2 emission factors, the SCAQMD staff expects that there will be line-haul locomotives that will not achieve the Tier 2 emission factors. Thus, the SCAQMD staff recommends that the DEIR/EIS not assume that all line-haul locomotives will meet Tier 2 emission factors. It would be appropriate, however, to assume that all line-haul locomotives meet Tier 2 emission factors if the Lead Agency requires this in either the project description or mitigation measures for the DEIR/EIS. In addition, as is noted below, further reductions beyond Tier 2 levels could feasibly be achieved during the life of this project.

Idling Assumptions for Line-Haul Locomotives. Page 3.2-28 of the DEIR/EIS, states that idling times for line-haul locomotives at the rail yards were adjusted from 1.9 to 1.0 hours starting in 2006 in response to the 2005 CARB/Railroad Statewide Agreement. Although the Statewide Agreement does include a provision for idling restrictions, there are many exceptions to this restriction. Thus, the SCAQMD staff recommends that the idling times for line-haul locomotives in rail yards not be adjusted, unless the Lead Agency intends to include this as a requirement of the proposed project or as an enforceable mitigation measure. Moreover, in a deposition in the lawsuit filed by Burlington Northern Sante Fe (BNSF) and Union Pacific Railroads against the SCAQMD, the Regional Vice President for South Operations at BNSF stated that they made no operational changes to comply with idling requirements in the Agreement.

Emission Estimates in California. The SCAQMD staff is concerned that the DEIR/EIS did not calculate emissions in the state of California, and only included emissions to the edge of the South Coast Air Basin. Page 3.2-27 of the DEIR/EIS states that average one-way truck trip distances from Berth 97-109 Terminal were assumed to be "90 miles to the edge of the basin (for destinations outside of the basin)." In addition, page 3.2-28 also states that, "the average one-way train tip distance is assumed to be 90 miles, which is the approximate distance from the railyards to the edge of the South Coast Air Basin." It is the SCAQMD staff's understanding that it is the intent of CEQA to apply to impacts occurring within the state. Further CEQA Guidelines §21080(14) states that, "any emissions or discharge that would have a significant effect on the environment in this state are subject to this division." Thus, SCAQMD staff recommends the DEIR/EIS include all emissions that would occur in the state of California.

Mitigation Measures

Mitigation Measure for Locomotives

The SCAQMD staff recommends that the DEIR/EIS include a mitigation measure for locomotives. This measure proposes that all locomotives operating in and out of the two ports by 2011 have Tier-3 equivalent emissions where locomotives meet either new Tier-3 emission standards or older Tier-2 locomotives are retrofitted with diesel particulate filters (DPF) and selective catalytic reduction (SCR) systems. Installation and replacement with cleaner engines will reduce oxides of nitrogen and PM2.5. SCRs will reduce NOx emissions about 90%, and PM by 50%; DPF will reduce PM by at least 85%. As an interim step, diesel oxidation catalyst could reduce PM by at least 30%.

The lead agency should also require use of switch locomotives achieving 90% level of control of particulates and NOx. Feasible technologies include hybrid or "multi engine" switchers using non-road engines to generate electric power, DPFs and SCR.

Mitigation Measure for Harbor Craft While at Berth

This mitigation measure focuses on harbor craft that are home-ported at POLA or POLB and could potentially be retrofitted with additional control devices. This measure proposes to require all harbor craft to meet EPA Tier-2 standards for harbor craft or meet equivalent reductions, as well as to require no later than 5 years or when they first become available, all previously re-powered harbor craft to retrofit with the most effective CARB verified/verifiable NOx and PM emissions reduction technologies.

MM AQ-1: Emulsified Diesel for Derrick Barges

The DEIR/EIS proposes to use emulsified diesel for all diesel-powered derrick barges used for pile drivers. SCAQMD staff recommends that the Lead Agency require implementation of other pollution control strategies that have a greater emission reduction benefit, in conjunction with use of emulsified diesel. In particular, SCAQMD staff recommends that MM AQ-1 be modified as follows:

Hierarchy of Recommendation for MM AQ-1 for all off-road equipment:

1. Use of on-road engines that meet the 2010 emission standards for NOx and PM.
2. If use on-road engines that meet the 2010 standard are in feasible (not commercially available), use of LNG (exceeding 2007 on-road standard for NOx and PM).
3. If LNG is in feasible (not commercially available), use of cleanest on-road engines that meet the 2007 emission standards for NOx and PM.
4. If use of on-road engines that meet the 2007 NOx and PM on-road standards are in feasible (not commercially available), use of off-road engines that meet the EPA Tier 3 off-road emission standard in combination with verified diesel emission controls (VDECs) that will provide the greatest reduction in NOx and PM.
5. Only if the above approaches are determined to be in feasible (not commercially available), then the use of emulsified, ultra low sulfur fuel is recommended for all off-road equipment.

MM AQ-2: Expanded VSRP
SCAQMD staff concurs with the proposed mitigation measure for expanding the VSR Program of 12 knots within 40 nautical miles from Point Fermin to the Precautionary Area. In addition, the SCAQMD staff recommends that the Lead Agency apply mechanisms to ensure that this measure is enforceable and 100 percent compliance is achieved.

MM AQ-3: Fleet Modernization for On-Road Trucks
The DEIR/EIS proposes to require all on-road heavy-duty diesel trucks used for construction work onsite or to convey material to or from the site, to be 2007 model year, or be 1994 or later model year retrofitted with a CARB-verified Level 3 diesel particulate filter.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for on-road trucks that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-3 be modified as follows:

Hierarchy of Recommendation for MM AQ-3:
Require entire fleet of on-road trucks used for construction or to convey material to or from the site to:

1. Meet the 2010 on-road emission standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); or
2. If it infeasible (not commercially available) for all on-road trucks used for construction activities to meet the 2010 standard, such trucks shall use LNG (exceeding 2007 on-road standard for NOx and PM).
3. If it is infeasible (not commercially available) for on-road trucks to use LNG, such trucks shall at least meet the 2007 standard of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM.
4. Only if the above approaches are determined to be infeasible (not commercially available), use of 2003 or later model year trucks retrofitted with the highest level of CARB-verified NOx and PM control devices is recommended.

MM AQ-4: Fleet Modernization for Construction Equipment
The DEIR/EIS proposes to require all off-road diesel-powered equipment greater than 50 hp (except derrick barges and vessels) to meet EPA Tier 2 emission standards.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for off-road equipment that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-4 be modified as follows as recommended under MM AQ-1.

MM AQ-9: Alternative Fuel Yard Tractors at Berth 97-109
The DEIR/EIS proposes to fuel all yard tractors at Berth 97-109 with alternative fuel liquefied propane gas [LPG] beginning September 30, 2004.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for yard tractors that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-9 be modified to require all yard tractors to:

1. Meet the 2010 on-road emission standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); or
2. If it is infeasible (not commercially available) for all yard tractors used for construction activities to meet the 2010 standard, such trucks shall use LNG (exceeding 2007 on-road standard for of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM).
3. If it is infeasible (not commercially available) for all yard tractors use LNG, such yard tractors shall be equipped with engines meeting EPA Tier 4 off-road engine standards.
4. If it is infeasible (not commercially available) to use EPA Tier 4 off-road engine standards, such yard tractors shall at least meet the 2007 standard of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM.

MM AQ-10: Alternative Fuel Yard Tractors at Berth 121-131

The DEIR/EIS proposes to fuel all yard tractors at the Berth 121-131 rail yard that handle containers moving through Berths 97-109 with alternative fuel (liquefied propane gas [LPG]) beginning January 1, 2007.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for yard tractors that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-10 be modified to require all yard tractors to:

1. Meet the 2010 on-road emission standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); or
2. If it is infeasible (not commercially available) for all yard tractors used for construction activities to meet the 2010 standard, such trucks shall use LNG (exceeding 2007 on-road standard for of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM).
3. If it is infeasible (not commercially available) for all yard tractors use LNG, such yard tractors shall be equipped with engines meeting EPA Tier 4 off-road engine standards.
4. If it is infeasible (not commercially available) to use EPA Tier 4 off-road engine standards, such yard tractors shall at least meet the 2007 standard of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM.

MM AQ-11: Emulsified Fuels and Oxidation Catalysts

The DEIR/EIS proposes that all diesel-powered toppicks and sidepicks operated at Berth 97-109 will be run on emulsified diesel fuel, plus a diesel oxidation catalyst (DOC), beginning September 30, 2004.

In addition to use of emulsified diesel fuel, the SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for diesel-powered

toppicks and sidepicks operated at Berth 97-109 that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-11 be modified as follow to require toppicks and sidepicks to:

1. Meet the 2010 on-road emission standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); or
2. If it is infeasible (not commercially available) to use on-road truck engines that meet the 2010 standard, such toppicks and sidepicks shall use LNG (exceeding 2007 on-road standard for of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM).
3. If it is infeasible (not commercially available) for all yard tractors use LNG, such toppicks and sidepicks shall be equipped with engines meeting EPA Tier 4 off-road engine standards.
4. If it is infeasible (not commercially available) to use EPA Tier 4 off-road engine standards, such toppicks and sidepicks shall at least meet the 2007 standard of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM.

MM AQ-12: Emulsified Fuels and Oxidation Catalysts
The DEIR/EIS proposes that all diesel-powered forklifts, yard sweepers and rubber-tired gantry cranes (RTGs) operated at Berth 97-109 will be run on emulsified diesel fuel, plus a diesel oxidation catalyst (DOC), beginning January 1, 2007.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for diesel-powered forklifts, yard sweepers and rubber-tired gantry cranes (RTGs) operated at Berth 97-109 that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-12 be modified as follows:

1. Meet the 2010 on-road emission standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); or
2. If it is infeasible (not commercially available) to use on-road truck engines that meet the 2010 standard, such forklifts, yard sweepers, and RTGs shall use LNG (exceeding 2007 on-road standard for of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM).
3. If it is infeasible (not commercially available) to use LNG, forklifts, yard sweepers, and RTGs shall at least meet the 2007 on-road emission standard of 1.2 g/bhp-hr for NOx and 0.01 g/bhp-hr for PM.
4. If it is infeasible (not commercially available) for all yard tractors to meet the 2007 on-road standards for NOx and PM, such forklifts, yard sweepers, and RTGs shall be equipped with engines meeting EPA Tier 4 off-road engine standards and diesel particulate filters.

MM AQ-13: Fleet Modernization for On-Road Trucks
The DEIR/EIS proposes to increase the percentage of heavy-duty trucks serving the proposed project that meet the EPA 2007 emission standards, implemented from 2007 to 2012, as follows:

- 15% in 2007
- 30% in 2008
- 50% in 2009
- 70% in 2010

- 90% in 2011
- 100% in 2012 and beyond

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for heavy-duty trucks serving the proposed project that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-13 be modified as follows:

- By 2011 with interim progress goals, require heavy duty trucks serving the proposed project to meet the following requirements:
    - 25% of the fleet shall be fueled with liquefied natural gas (LNG) (meeting 2010 standard); and
    - 25% of the fleet shall meet the 2010 standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); and
    - 50% of the fleet shall be 2003 or later model year retrofitted with highest level of CARB-verified PM and NOx control equipment.

MM AQ-14: Fleet Modernization of Heavy Duty Trucks Entering Berths 97-109
The DEIR/EIS proposes that heavy duty trucks entering Berths 97-109 will be run on LNG on the following schedule:

- 20% in 2013
- 40% in 2014
- 60% in 2015
- 80% in 2016
- 100% in 2017

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for heavy-duty trucks entering Berths 97-109 that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-14 be modified as follows:

- By 2011 with interim progress goals, require heavy duty trucks serving the proposed project to meet the following requirements:
    - 25% of the fleet shall be fueled with liquefied natural gas (LNG) (meeting 2010 standard); and
    - 25% of the fleet shall meet the 2010 standard for NOx (0.2 g/bhp-hr) and for PM (0.01 g/bhp-hr); and
    - 50% of the fleet shall be 2003 or later model year retrofitted with highest level of CARB-verified PM and NOx control equipment.

MM AQ-15: Expanded Vessel Speed Reduction Program (VSR Program).
SCAQMD staff concurs with the proposed mitigation measure for expanding the VSR Program of 12 knots within 40 nautical miles from Point Fermin to the Precautionary Area. In addition, the SCAQMD staff recommends that the Lead Agency consider mechanisms to ensure that this measure is adequately enforced.

MM AQ-16: Ship Auxiliary Engine, Main Engine, and Boiler Fuel Improvement Program

The DEIR/EIS proposes to use low-sulfur fuel in the auxiliary engine, main engines and boilers within 40 nautical miles (nm) of Point Fermin at the following annual participation rate:

- 2007 and 2008 – 50% of auxiliary engines, main engines and boilers to use marine gas oil (MGO) or marine diesel oil (MDO) with a maximum sulfur content of 0.5%
- 2009 – 70% of auxiliary engines, main engines and boilers to use MGO or MDO with a maximum sulfur content of 0.2%
- 2010 and 2011 – 50% of auxiliary engines, main engines and boilers to use MGO with a maximum sulfur content of 0.2%. Other engines to use MGO or MDO with a maximum sulfur content of 0.5%.
- 2012, 2013 and 2014 – 70% of auxiliary engines, main engines and boilers to use MGO with a maximum sulfur content of 0.2%. Other engines to use MGO or MDO with a maximum sulfur content of 0.5%.
- 2015 and thereafter – 100% of auxiliary engines, main engines and boilers to use MGO with a maximum sulfur content of 0.2%.

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for auxiliary engines, main engines and boilers that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-16 be modified as follows to require low-sulfur fuel in the auxiliary engines and main engines within 40 nautical miles of Point Fermin at the following annual participation rates:

- 2007 to 2009 – use of marine fuel in all auxiliary and main engines with a maximum sulfur content of 0.2%.
- 2010 and after – use of marine fuel in all auxiliary and main engines with a maximum sulfur content of 0.1%.

MM AQ-17: Slide Valves on Ship Main Engines

The DEIR/EIS proposes to equip main engines with slide valves, as follows:

- 70% of annual ship calls beginning July 1, 2007
- 100% of ship calls beginning July 1, 2010

SCAQMD staff recommends that the Lead Agency consider implementation of pollution control strategies for main engines that have a greater emission reduction benefit. In particular, SCAQMD staff recommends that MM AQ-17 be modified as follows:

- All new vessels making ship calls at the proposed project shall be equipped with selective catalytic reduction (SCR); and
- All main engines on existing vessels making ship calls at the proposed project shall:
  1. be equipped with SCR, if feasible; or
  2. if SCR is not feasible, all main engines shall be equipped in combination with slide valves, water injection, or other technology capable of achieving NOx reduction of at least 60%, and PM reduction of at least 30%.

MM AQ-21: General Mitigation Measure
The SCAQMD staff recommends that the lead agency broaden this mitigation measure to include not only any kind of CARB-certified technology, but future control technologies that become available.

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