



South Coast Air Quality Management District
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E-MAILED: AUGUST 15, 2008

August 15, 2008

Richard D. Cameron, Director of Environmental Planning
Port of Long Beach
925 Harbor Plaza
Long Beach, CA 90802

Dear Mr. Cameron:

Draft Environmental Impact Statement/Report (Draft EIS/EIR) for the Proposed Middle Harbor Redevelopment Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The proposed Middle Harbor container terminal is located in the Port of Long Beach near already impacted residential communities that are currently experiencing health risks in excess of 1500 in a million¹. If approved, the proposed Middle Harbor Redevelopment Project will be the largest container terminal expansion project since the adoption of the San Pedro Bay Ports Clean Air Action Plan (CAAP) by the Ports of Los Angeles and Long Beach. At full implementation, the proposed Middle Harbor Redevelopment Project will generate over 3.6 million truck trips, 360 ship calls, and 2,000 rail trips annually. Although the proposed project through implementation of mitigation measures is expected to reduce the health risk to the surrounding community, the residual health risk remains elevated and of concern.

In general, the SCAQMD staff has concerns regarding the air quality analysis, sufficiency of mitigation measures, and development of the San Pedro Bay Standards. These comments are briefly discussed below. Additional and more detailed comments are provided in Attachment I.

Air Quality Analysis. The SCAQMD staff is concerned that the lead agencies have not adequately calculated the peak daily emissions from the proposed project. The peak daily emissions should be representative of the highest emissions estimate that can occur during the construction phase, operational phase, and any overlapping construction and operational phases of the proposed project. Because the construction phase extends over a ten year period and will occur simultaneously with operation of the proposed project, the significance determination in the Final EIR should be based on the peak daily overlapping construction and operational emissions compared to the significance thresholds for operational emissions.

¹ California Air Resources Board. April 2006. "Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach."

The SCAQMD staff is concerned that reductions from mitigation measures are inappropriately applied to the unmitigated project. The proposed unmitigated project does not specify strategies for Vessel Speed Reduction Program (VSRP) and 0.2 percent sulfur fuel for ocean-going vessels. SCAQMD staff recommends the lead agencies clearly indicate in Final EIR if the VSRP and use of 0.2 percent low sulfur fuel requirement is considered as part of the unmitigated or mitigated project. The Final EIR air quality analysis for the unmitigated scenario should reflect only those reductions described in the projection description.

To achieve the goals of the San Pedro Bay Ports CAAP and the regional air quality goals, it is imperative that the air pollution impacts be appropriately quantified and communicated, and that the project include all feasible measures to mitigate air quality and public health impacts. Additional mitigation measures are feasible, and some measures included in the DEIS/EIR can feasibly be accelerated or modified for stronger commitment. Such measures must be included as required by CEQA Guidelines §15126.4 to reduce impacts below significance.

Low Sulfur Fuel. Reducing fuel sulfur is one of the most significant and feasible means of expeditiously reducing particulate and sulfur oxides emissions from the proposed Middle Harbor container terminal. Based on a conversation with Port staff regarding MM AQ-6, it is SCAQMD staff's understanding that the 0.2 percent low sulfur fuel within 40 nautical miles of Point Fermin compliance requirement for ocean going vessels calling at the Middle Harbor container terminal would begin immediately upon project approval. SCAQMD staff recommends the commitment by Port staff to implement MM AQ-6 should include greater specificity and commitment to use low sulfur fuel in main and auxiliary engines of vessels calling at the proposed Middle Harbor container terminal. This measure is consistent with the low sulfur marine fuel requirements in the CAAP Control Measures OGV-3 and OGV-4. In addition, SCAQMD staff recommends all vessels calling at the Middle Harbor container terminal shall use fuel in main and auxiliary engines with sulfur content no higher than 0.1 percent sulfur fuel by 2010.

On-dock Rail. With roughly a fifteen fold increase in annual rail movements by 2020 for the proposed Middle Harbor Redevelopment project, SCAQMD staff recommends implementation of CAAP Measure RL-2 to reduce emissions from existing Class I railroad operations that will be servicing the on-dock rail yard. SCAQMD staff believes that the emissions reduction strategy should be based on the State Implementation Plan (SIP) of accelerating introduction of cleaner locomotives. SCAQMD staff recommends 90% control of PM and NOx for switchers and helper locomotives at the expanded Pier F intermodal on-dock rail yard by 2011. In addition, SCAQMD staff recommends all line haul locomotives at the expanded Pier F intermodal on-dock rail yard achieve a Tier 4 emission rate by 2014, as assumed in the SIP.

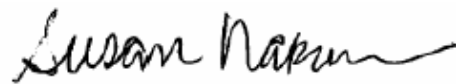
The proposed project should include sufficient on-dock rail capacity for all containers destined to be transported out of the region by rail. This will minimize highway congestion impacts caused by truck drayage to near and off-dock rail yards, and will reduce the need for additional capacity at near and off-dock rail yards. We understand that space for on-dock yards is limited, but CAAP measure RL-3 committed the ports to explore all opportunities to maximize on-dock rail and explore alternative operating procedures such as transporting containers by rail from the docks unsorted by destination as a means of freeing up space devoted to creating single destination trains.

Main Engine Controls for New Vessel Builds and for Existing Vessels. SCAQMD staff is concerned that the Middle Harbor Redevelopment Project DEIS/EIR requires no mitigation measure for main engine controls for ocean going vessels. SCAQMD staff recommends a mitigation measure for new vessels to 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. There are currently a significant number of new vessels on order. Once those vessels are built and in the water, the technical and economic challenges to control them will be much greater. Controls such as water injection, emulsified fuels or humid air are feasible technologies. In addition, SCR is a mature technology in use on a wide variety of sources including marine vessels. 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.

San Pedro Bay Standards. We understand the Ports are proceeding to develop the San Pedro Bay Standards. The CAAP includes a Project Specific Standard stating that the contribution of emissions from a project to cumulative effects will allow for timely achievement of the San Pedro Bay Standards. It is uncertain if the residual emissions and health risk from the Middle Harbor container terminal over the course of the long term lease will allow for the timely achievement of the San Pedro Bay Standards. In the absence of the San Pedro Bay Standards, the SCAQMD staff urges the Lead Agencies to compare residual emissions from this proposed project, including cumulative emissions from all other foreseeable port actions, with the 2007 Air Quality Management Plan (AQMP) mass emission targets for the ports, and ensure project approval is consistent with achieving those targets.

The SCAQMD staff appreciates the opportunity to comment on this important project. We look forward to working with the Port of Long Beach on this and future projects. If you have any questions, please call me at (909) 396-3105.

Sincerely,



Susan Nakamura
Planning Manager

Attachment

LAC080521-01
Control Number

Attachment I

Additional Comments on the Draft EIS/EIR for the Proposed Middle Harbor Redevelopment Project

The following includes more detailed and specific comments on the Proposed Middle Harbor Redevelopment Project.

Mitigation Measures

Pursuant to CEQA Guidelines §15126.4 (a)(2) mitigation measures must be fully enforceable through permit conditions, agreements or other legally binding instruments. One means of making the mitigation measures for the proposed project legally binding is for the lead agencies to incorporate them into the Terminal Operator's lease agreement. Furthermore, the lease agreement or permit language with the Terminal Operator must specifically contain binding requirements to monitor the air quality mitigation measures and must provide a legal mechanism to allow the Lead Agencies to enforce the mitigation measures. As discussed in more detail below, many of the mitigation measures lack specificity such as specific dates and milestones. The lease agreement or permit language should also include an annual environmental status report wherein the terminal operator would be required to provide a status update of implementation of mitigation measures.

Mitigation Measure for On-road Trucks During Construction

SCAQMD staff urges the lead agencies to require that as part of a mitigation measure for construction, that the lead agencies require use of the cleanest available trucks. Specifically, trucks used for construction prior to construction year 2015 should use engines with the lowest certified NOx emissions levels, but no greater than the 2007 NOx emission standards. In addition, trucks used during construction in 2015 and beyond should meet U.S. EPA 2010 emission standards.

MM AQ-1: Additional Fugitive Dust Controls

MM AQ-1 requires the Project construction contractor to develop and implement dust control methods that will achieve controls levels indicated in the SCAQMD Rule 403 dust control plan. The lead agencies have determined on page 3.2-27 of the DEIS/EIR that the construction related air quality impacts from the proposed project are estimated to exceed established daily significance thresholds for PM10 and PM2.5. SCAQMD staff recommends that the lead agencies modify existing and add new mitigation measures to further reduce particulate matter from the proposed project. Recommended changes include:

- Apply approved non-toxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas inactive for ten days or more).
- Suspend all soil disturbance activities when winds exceed 25 mph as instantaneous gusts or when visible plumes emanate from the site and stabilize all disturbed areas.

Recommended additions include:

- 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 stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces;
- Pave road and road shoulders;
- Apply water three times daily or as needed to areas where soil is disturbed.

MM AQ-2: Emission Controls for Non-road Construction Equipment

MM AQ-2 requires construction equipment shall meet the EPA Tier 4 non-road engine standards, where feasible (Tier 4 standards assumed to become available in year 2012). SCAQMD staff is concerned that this mitigation measure lacks commitment by the lead agencies. SCAQMD staff recommends including interim standards prior to 2012. Specifically, all construction equipment prior to 2012 should be equipped with a Level 2 or 3 verified diesel emissions control and also should meet the cleanest off-road diesel emission level, but no greater than Tier 3 NOx emission standards. In addition, all construction equipment post 2012 should meet Tier 4 emission standards.

The SCAQMD staff also recommends mandatory inclusion of Best Management Practices (BMPs) for construction equipment. BMPs, in addition to the Tier requirements specified above, should include at a minimum Diesel Oxidation Catalysts and catalyzed diesel particulate traps; maintain equipment to manufacturers' specification; unnecessary idling restriction to 5 minutes (per CARB regulation); high pressure fuel injectors; and use electricity from power poles rather than temporary diesel or gasoline power generators.

MM AQ-3 Emission Controls for Construction Tugboats

MM AQ-3 requires all tugboats used in construction shall meet the EPA Tier 2 marine engines standards, and if feasible use construction tugs that meet EPA Tier 3 marine engine standards (assumed to become available starting in year 2012). SCAQMD staff recommends the lead agencies provide specific language to the mitigation measure to clarify when tugs meeting EPA Tier 3 standards are required. Lastly, as stated in CAAP measure HC-1, the lead agencies should modify the mitigation measure to require all tugboats to use shore-power while at their home fleet location.

MM AQ-4: Expanded VSR Program

MM AQ-4 requires all ocean going vessels that call at the Middle Harbor container terminal to comply with the expanded VSR program of 12 knots from 40 nm from Point Fermin to the Precautionary Area. SCAQMD staff recommends the mitigation measure commit to 100% of all ocean going vessels that call at the Middle Harbor container terminal comply with the Expanded VSR Program of 12 knots from 40 nm from Pont Fermin to the Precautionary Area upon project approval. If the 100% compliance rate cannot be met, then the lead agencies should indicate in the mitigation measure that similar reductions would be achieved elsewhere, with specifics.

MM AQ-5: Shore-to-Ship Power ("Cold Ironing")

MM AQ-5 requires ocean going vessels that call at the Middle Harbor container terminal to utilize shore-to-ship power while at berth. The mitigation measure allows for lease stipulations

in considering alternative technologies that would achieve 90 percent of the emission reductions of cold-ironing. Based on the proposed wharf construction schedule, 33% of ocean going vessels (OGVs) calling at the Middle Harbor Container Terminal will cold-iron in 2010 with 100% of vessels to cold iron by 2015. SCAQMD staff recommends clarification of the lease stipulation mentioned in the mitigation measure which will include consideration of alternative technologies that achieve 90 percent of the emission reduction of cold ironing. The mitigation measure should list those alternative technologies for consideration. Furthermore, SCAQMD staff recommends the mitigation measure to have an interim phase-in target prior to 2015. Lastly, beginning 2010, all ships retrofitted for cold ironing, should be required to cold iron while hoteling at 100% compliance rate, with the exception of circumstances when a cold iron capable berth is unavailable due to utilization by another cold iron capable ship.

Lastly, as mentioned in the above paragraph, MM AQ-5 Shore-to-Ship Power (“Cold Ironing”) would require 33 percent of all OGVs calling at the Middle Harbor Terminal to cold iron in 2010 and this activity would increase to 100 percent by 2015. However, based on review of the construction schedule, the electrical Pier E Substation will not be completed until 2010. SCAQMD staff requests clarification of how the 33 percent cold ironing mitigation measure requirement for 2010 will be met with limited access to the shore power infrastructure that is needed. In addition, SCAQMD staff requests information detailing the amount of shore power berths the proposed Middle Harbor Terminal will have for operational years 2010, 2015, 2020, and 2030.

MM AQ-6: Low-Sulfur Fuels in OGV

MM AQ-6 requires use of 0.2 percent low-sulfur fuel in all OGV auxiliary and main engines at berth and out to a distance of 40 nm from Point Fermin, or implement equivalent emission reductions. However, the mitigation measure lacks a specific commitment date for compliance. Based on a conversation with Port staff regarding MM AQ-6, it was SCAQMD staff’s understanding that the 0.2 percent low sulfur fuel compliance requirement for OGVs calling at the Middle Harbor container terminal would begin immediately upon project approval. This commitment by Port staff to implement MM AQ-6 should be included in the Final EIR. In addition, on or before January 1, 2010, all vessels calling at the Middle Harbor Terminal should use fuel in main and auxiliary engines with sulfur content no higher than 0.1 percent within 40 nm of Point Fermin.

MM AQ-7: Container Handling Equipment

MM AQ-7 requires all project container handling equipment (CHE) to be equipped with VDEC by 2009 and a phase-in of EPA Tier 4 non-road engine standards for CHE from 2010 to 2014. SCAQMD staff understands that the electric yard tractor is currently in the test phase. However, SCAQMD staff recommends the use of an all electric yard tractor fleet for the Middle Harbor terminal once the test phase is successfully completed. The mitigation measure should anticipate the electric yard tractor becoming commercially available for use at the terminal. Furthermore, SCAQMD staff recommends designing the terminal to utilize electric rail mounted gantry cranes reducing the need for other terminal equipment such as yard tractors, top-picks, and side-picks. The Port of Los Angeles has proposed using electric rail mounted gantry cranes on the China Shipping terminal.

MM AQ-8: Heavy Duty Trucks

MM AQ-8 requires a replacement schedule for all project heavy duty trucks consistent with the POLB Clean Truck Program Tariff. To augment this mitigation measure, SCAQMD staff recommends a phase-in schedule of electric drayage trucks for the Middle Harbor terminal once the test phase is successfully completed. SCAQMD staff understands that the electric drayage truck is currently in the test phase. The mitigation measure should anticipate the electric drayage truck becoming available for use at the terminal. However, LNG-fueled or other alternative fueled trucks should also be considered if the electric drayage trucks are not available. Similar to the China Shipping terminal project at the Port of Los Angeles, SCAQMD staff recommends heavy-duty diesel trucks entering the Middle Harbor Container Terminal required to be LNG-fueled in the following percentages:

- 50% in 2012 and 2013
- 70% in 2014 through 2017
- 100% in 2018 and thereafter

MM AQ-9: Clean Railyard Standards

MM AQ-9 indicates that the expanded Pier F Intermodal rail yard shall incorporate the cleanest locomotive technologies into its operations. SCAQMD staff recommends the expanded Pier F intermodal on-dock rail yard should incorporate the cleanest locomotive technologies consistent with CAAP measure RL-3. The SCAQMD staff recommends that the Final EIS/EIR include specific language clarifying the types of technologies and timeframe that this measure will implement. With roughly a 15 fold increase of trains from year 2005 (138 trains) to 2020 (2098 trains) anticipated at the proposed Middle Harbor Terminal, SCAQMD staff recommends 90% control of PM and NOx for switchers and helper locomotives at the expanded Pier F intermodal on-dock rail yard by 2011. In addition, SCAQMD staff recommends all line haul locomotives at the expanded Pier F intermodal on-dock rail yard achieve a Tier 4 emission rate by 2014, as assumed in the SIP.

MM AQ-10: Truck Idling Reduction Measures

MM AQ-10 indicates that the Middle Harbor container terminal operator will minimize on terminal idling and emissions. Potential methods listed in the mitigation measure to reduce idling include:

- Maximize the durations when the main gates are left open, including during off-peak hours.
- Implement a container tracking and appointment-based truck delivery and pick-up system to minimize fuel consumption and resulting criteria pollutant emissions.

SCAQMD staff recommends that this mitigation measure go beyond the CARB regulation. Although the CARB regulation restricts idling to five minutes, there are many exceptions to this regulation. One particular exception that increases the need for this mitigation measure is the truck queuing exception allowing idling to go beyond five minutes, thus increasing potential emissions in the future years with increased capacity and growth. Therefore, it is imperative for the lead agencies consider a mitigation measure that would increase terminal efficiency, beyond the current Pier Pass System. SCAQMD staff recommends the mitigation measure include as an example, implementing an Automated Gate System (AGS) to increase the efficiency of cargo transportation processing at the proposed Middle Harbor terminal. The mitigation measure should provide specific commitments and compliance dates.

MM AQ-11: Slide Valves on OGV Main Engines

MM AQ-11 indicates that all ocean-going vessels that call at the middle harbor container terminal will have slide fuel valves installed on their main engines, or implement an equivalent emission reduction technology. The SCAQMD staff supports use of slide valves in ship main engines. However, the mitigation measure lacks commitments that are specific or enforceable. Slide valves are available technology that can be readily retrofitted into existing engines without the need to enter dry-dock. Many such applications have occurred. A phase-in schedule for slide valves is feasible now and should be provided in the DEIS/EIR as part of this mitigation measure. We urge that 100 percent of ship calls be equipped with slide valves no later than two years after project approval.

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 _x	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 ₂
Water Injection	Humidification of Fuel-Air Mixture	10-20%	20-40%	N/A

Slide valves that provide a 30 percent reduction in NO_x 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 used in Europe. In addition, SCR is a mature technology used on a wide variety of sources including marine vessels and could potentially be applied to a large container ship. 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.prof.u.se or can be obtained from the SCAQMD staff.

Retrofits of existing vessels should meet the State Implementation Plan (SIP) of achieving fleet average emission reductions utilizing a combination of advanced controls technologies mentioned above. Those emission reductions include a 30% reduction of NO_x and particulates by 2014, and a 70% reduction of NO_x and 50% reduction of particulates by 2023.

Main Engines in New Vessel Builds

SCAQMD staff is concerned that no mitigation measure was found in the DEIS/EIR for main engine controls in new vessel builds and consider the DEIS/EIR to be inadequate without this mitigation measure. Based on the comments and list of Feasible Controls summarized in the preceding section, SCAQMD staff urges inclusion of a mitigation measure requiring new vessel builds for the proposed Middle Harbor container terminal to meet at a minimum the SIP requirement for main engine controls for new vessel builds. As mentioned in MM AQ-11, 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 NO_x and particulates by 2014, and a 70% reduction of NO_x and 50% reduction of particulates by 2023.

The relative feasibility of installing advanced control in new builds as discussed in MM AQ-11 underscores the importance of acting immediately to establish control requirements for new vessels in the proposed terminal operator's lease. 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. 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 NO_x 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 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 Middle Harbor 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 Middle Harbor EIR can and should accelerate implementation of such standards sufficiently for the emission reductions assumed in the SIP to be achieved.

MM AQ-12: Expanded VSR Program for GHG

MM AQ-12 indicates that all ocean going vessels that call at the Middle Harbor container terminal will comply with the expanded VSR Program of 12 knots from the California overwater border to the precautionary area. However, no commitment date or distance to the California overwater border was provided. SCAQMD staff request clarification with regards to the difference between MM AQ-12 and MM AQ-4. Furthermore, SCAQMD staff recommends combining MM AQ-4 and MM AQ-12 into one mitigation measure that would achieve the

greatest emissions reductions for the project and require 100% compliance upon project approval.

MM AQ-13: Low Sulfur Fuels in OGV for GHG

MM AQ-13 indicates that all ocean going vessels that call at the Middle Harbor container terminal will use 0.2% or lower sulfur MGO fuel in vessel auxiliary and main engines at Berth and within California State Waters, or implement equivalent emission reductions. However, no commitment date or distance to the California State Waters was provided. SCAQMD staff request clarification with regards to the difference between MM AQ-13 and MM AQ-6. Furthermore, SCAQMD staff recommends combining MM AQ-6 and MM AQ-13 into one mitigation measure that would achieve the greatest emissions reductions for the project and require 100% compliance upon project approval.

Green-Container Transport System. The Final EIS/EIR should commit to a process of implementing zero- or near-zero emission transport technologies such as rail electrification. Through implementation of the CAAP, the Ports of Los Angeles and Long Beach are evaluating advanced cargo transportation technologies. The Lead Agencies should include a mitigation measure that would incorporate this commitment. Freight rail electrification is clearly feasible, being in wide use in Europe.

Exceedance of Projected Throughput. The lease agreement or permit should mandate the performance of an annual analysis of cargo throughput. The SCAQMD staff urges the lead agencies to establish requirements in the lease providing that if the analysis shows the throughput is above levels assumed in the Final EIS/EIR, additional mitigation measures will be required.

Metropolitan Stevadore (METRO) Bulk Loading Terminal Railyard. Page 1-30 of the DEIS/EIR states that track realignments and connection of a third track under Ocean Boulevard located to the west of the existing mainline tracks would allow METRO to perform switching operations safely and not interfere with mainline train traffic. SCAQMD recommends that if the METRO rail yard is being redeveloped under this DEIS/EIR, CAAP measure RL-3 for new and redeveloped rail yards should be applied to the METRO rail yard.

Air Quality Analysis

Peak Daily Emissions. The SCAQMD staff is concerned that the lead agencies have not adequately calculated the peak daily emissions from the proposed project. The peak daily emissions should be representative of the highest emissions estimate that can occur during the construction phase, operational phase, and any overlapping construction and operational phases of the proposed project. Because the construction phase extends over a ten year period and will occur simultaneously with operation of the proposed project, the significance determination in the Final EIR should be based on the peak daily overlapping construction and operational emissions compared to the significance thresholds for operational emissions.

In addition, it appears that emission evaluated in project years 2010, 2015, 2020 and 2030 were arbitrarily selected incorporating peak daily assumptions by the lead agencies, which does not necessarily reflect peak daily emissions that are expected to occur from implementation of the proposed project. The SCAQMD staff is concerned that the peak daily emissions may occur

during interim years and therefore adverse air quality impacts are not adequately addressed. The SCAQMD staff recommends that the lead agencies determine the year in which peak daily operational emissions will actually occur and provide additional clarification in the Final EIR to substantiate selection of the peak year.

Operation Emissions. The SCAQMD staff believes that for existing equipment or sources, only those emission reductions that are achieved beyond adopted rules and regulations should be attributed to the proposed project. Thus, emission reductions that result from adopted rules and regulations with future effective compliance dates can only be attributed to implementation of those existing regulatory programs and are not a result of implementation of the proposed project. The SCAQMD staff recommends that the FEIR excludes from the project emissions, those emission reductions from existing equipment or sources that will occur due to adopted rules, regulations, or other enforceable reduction programs. However, for existing equipment or sources, any emission reductions that go beyond adopted rules or regulations or other enforceable agreements can be attributed to implementation of the proposed project.

Construction Emissions Assumptions. Page 3.2-20 provides a brief discussion on the methodologies used for determining construction emissions and the peak daily construction emissions. SCAQMD staff recommends providing a more detailed discussion on the methodology and the assumptions used in determining the construction emissions and the peak daily construction emissions. A similar table to Table 3.2-9 (Middle Harbor Project Air Quality Operational Assumptions for the Project and Alternative Scenarios) used to describe construction emission assumptions outlining regulations/CAAP measure assumption for each source category by project scenario would be helpful to the reviewer of the DEIS/EIR. Some examples of assumptions that should have been provided include (not all encompassing list):

- On-road Trucks: Construction related truck travel distances and speed, truck idling times
- Tugboats: Sulfur content of fuel, tugboat usage description usage during dredging, tugboat usage description during assist of general cargo ship during crane delivery, tugboat usage description during landfill and wharf construction activities
- General Cargo Ships: Description of VSRP observation, boundary for emissions calculations, usage description for crane delivery (if any) or general cargo (if any)

Construction Fugitive Dust Emissions. Page 3.2-24 of the DEIS/EIR, the lead agencies assumes a 75 percent reduction from uncontrolled PM10 fugitive dust emissions from soil disturbance during construction from watering and the use of other measures on page 3.2-27 (AQ-1: Additional Fugitive Dust Control). Based on control efficiencies from the Western Regional Air Partnership (WRAP) Fugitive Dust Handbook (September 2006), the SCAQMD staff recommends using a control efficiency of 61 percent to estimate mitigated fugitive dust impacts from soil disturbance. Therefore, the lead agency should revise the construction air quality impacts from fugitive dust (PM10) in the Final EIS/EIR using the 61 percent control efficiency.

The lead agency also uses a 90 percent control efficiency for construction PM10 fugitive dust stating that dust control methods would be developed and implemented in a SCAQMD Rule 403 (Fugitive Dust) dust control plan but does not include in the Draft EIS/EIR the specific measures that the lead agency is committed to implement. In the Final EIS/EIR, the lead agency should

specify those measures and quantify the effects of the control measures to demonstrate the control efficiencies of those measures.

Construction Emissions Significant. Page 3.2-27 of the DEIS/EIR indicates that the construction air quality impacts from the proposed project are estimated to exceed established daily significance thresholds for volatile organic compounds (VOC), nitrogen oxide (NO_x), and particulate matter (PM10 fugitive dust) and PM2.5 (fugitive dust). SCAQMD staff recommends that the lead agencies consider adding the following additional mitigation 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
- Traffic speeds on all unpaved roads to be reduced to 15 mph or less.

Contaminated Sediments. Page 1-37 of the DEIS/EIR states that if borrowed materials included contaminated sediments, those materials would be capped and sequestered in an engineered fill by the placement of uncontaminated materials on top and at the sides in accordance with regulatory requirements and permits. SCAQMD staff requests that the lead agency provide in the Final EIR additional information regarding the contaminated sediments (amount, type of contaminant(s), transportation method of the contaminated sediments, etc.). The lead agencies are reminded that, if soil is contaminated by hydrocarbon contaminants, contaminated sites would be subject to SCAQMD Rule 1166 – Volatiles Organic Emissions from Decontamination of Soil and that compliance should be referenced in the Final EIR.

Electrification of Dredge Equipment. Page 3.2-22 of the DEIS/EIR indicates that all dredge equipment will use shoreside electricity to power during construction. SCAQMD staff is concerned that under the unmitigated scenario, the shoreside power infrastructure will not be available for use to electrically power dredge equipment. SCAQMD staff requests clarification with regards to the shoreside power source. Please identify in the Final EIR the source of power for the electric dredge equipment to be used during construction. If the shoreside power for the dredge equipment is anticipated to come from a diesel generator, the emissions from the generators should also be included in the unmitigated and possibly the mitigated scenarios.

Operational Emission Assumptions. Page 3.2-21, Table 3.2-9 identifies regulations/CAAP measures assumed for each project operational scenario. Some of the assumptions were also found in the footnotes of the tables in Attachments A-1.2 and A-1.3. However, when reviewing the tables, assumption specific approaches to calculating the emissions for the various emissions

sources during project operations was found to be deficient in the DEIS/EIR. SCAQMD staff requests the lead agencies adequately list all assumptions in a narrative or bullet list format for each source type for unmitigated and mitigated scenarios by source category. In addition, provide all additional assumptions used by source category with respect to the peak daily emissions estimates for the proposed project. Some examples of assumptions that should have been provided include (not all encompassing list):

- Container Ships: Boundary for emission calculations, VSRP compliance rate for baseline and future years, hoteling assumptions with and without AMP, hoteling durations, fleet mix for baseline and future years, ships at berth during peak scenario with validating explanation, ship activity during peak day scenario with validating explanation, hoteling time during peak day scenario, and sulfur content of fuel during peak day scenario.
- Tugboats: Fuel sulfur content for baseline and future operational years.
- Terminal Equipment: Available cranes for baseline and future operational years, peak day scenario with validating explanation, peak day factor used (if any).
- Trucks: Truck trip distances to off-dock rail yards, truck trip distances to non-rail yard destinations within California, truck trip distances to the California border, truck speed, and truck idling time for on-terminal and off-terminal, peak day scenario with validating explanation.
- Train and Rail Yard Equipment: Average train trip distance to the California border, distribution of containers moving through on-dock rail yards and off-dock rail yards, containers transported by each inbound and outbound train; peak day scenario for on-dock and off-dock rail yard with validating explanation, idling times for line-haul locomotives, and sulfur content of fuel.
- AMP Power Generation: Amount of electricity required by hoteling container ships.

Furthermore, The SCAQMD staff is concerned that reductions from mitigation measures are inappropriately applied to the unmitigated project. The proposed unmitigated project does not specify strategies for Vessel Speed Reduction Program (VSRP) and 0.2 percent sulfur fuel for ocean-going vessels. SCAQMD staff recommends the lead agencies clearly indicate in Final EIR if the VSRP and use of 0.2 percent low sulfur fuel requirement is considered as part of the unmitigated or mitigated project. The Final EIR air quality analysis for the unmitigated scenario should reflect only those reductions described in the projection description.

Emission Estimates in California. The Final EIR should include all emissions that would occur in the state of California. The DEIS/EIR did not calculate emissions in the state of California and only included emission to the edge of the South Coast Air Basin. The Annual and Peak Train Emission Tables found in Attachments A-1.2 and A-1.3 only provide emissions up to the South Coast Air Basin border. It is SCAQMD staff's understanding that it is the intent of CEQA to apply impacts occurring within the state of California. Further, CEQA Guidelines §21080(14) states that, "any emissions or discharge that would have significant effect on the environment in the state are subject to this division."

Vessel Speed Reduction Program (VSRP) 100% Compliance Assumption. Table 3.2-9 Middle Harbor Project Air Quality Operational Assumptions for the Project and Alternative Scenarios on Page 3.2-21 of the DEIS/EIR indicates 100% compliance for VSRP in the unmitigated project scenario. SCAQMD staff requests clarification of this assumption. SCAQMD staff understands

the VSRP to be mostly voluntary and that there is no specific rule, tariff, or agreement that would require container ships that would be calling at the proposed Middle Harbor Terminal to reduce speeds to 12 knots from 40 nm from Point Fermin to the Precautionary Areas.

Annual Trains. Page 1-19, Table 1.6-1 of the DEIS/EIR includes the number of annual trains for baseline conditions and project alternatives. As shown in the table, there is a significant increase in the number of annual trains due to the proposed project alternatives. The DEIS/EIR lacks sufficient detail on how these estimates were determined and SCAQMD staff requests that the Final EIR provide the assumptions for these projections. In order to show whether on-dock rail is being maximized, SCAQMD staff recommends that the table be amended to add percent TEUs going by way of trucks, near-dock rail, and on-dock rail for each alternative, as well as the baseline scenario.

During the review of the Attachment tables in A-1.2 and A-1.3 with regards to the annual trains, several discrepancies were detected by SCAQMD staff. SCAQMD staff recommends the lead agencies correct the following discrepancies and recalculate the emissions accordingly:

- Annual trains for year 2030 found on Tables A.1.2-AltM-19 and A1.3-AltM-19 is inconsistent with Table 1.6-4 (Project Operations Summary). Annual trains for year 2030 for the unmitigated scenario tables appear to be inconsistent as well.
- Annual trains for years 2010, 2015, 2020, and 2030 found on Tables A.1.3-Alt2M-19 and A1.3-Alt2U-19 for Alternative 2 is inconsistent with Table 1.6-1 (Project Alternatives Operations Summary).

Auxiliary Engine Fuel Sulfur Content Assumption. Table A.1.3-Alt1U-6 Annual Aux. Gen. Emissions (Cargo Vessel Transit, Fairway Zone), Table A.1.3-Alt1U-7 Annual Aux. Gen. Emissions (Cargo Vessel Transit, Precautionary Area), Table A.1.3-Alt1U-8 Annual Aux. Gen. Emissions (Cargo Vessel Transit, POLB Breakwater), Table A.1.3-Alt1U-9 Annual Aux. Gen. Emissions (Cargo Vessel Docking, POLB Breakwater), and Table A.1.3-Alt1U-10 Annual Aux. Gen. Emissions (Cargo Vessel Hoteling) assumes 100% usage of 0.2% sulfur MGO fuel for the unmitigated proposed project scenario. SCAQMD staff requests clarification of this assumption and because the scenario is unmitigated, the Lead Agencies should provide the state or federal law or tariff/agreement that would require 100% usage of 0.2% sulfur MGO fuel. SCAQMD staff is aware of no specific requirement where container ships that would be calling at the proposed Middle Harbor terminal would be required to use 0.2% sulfur MGO fuel in the unmitigated scenario. Furthermore, in reviewing Table 3.2-9 Middle Harbor Project Air Quality Operational Assumptions for the Project and Alternative Scenarios on page 3.2-21, the assumption of 0.2% sulfur MGO fuel is not marked as part of the unmitigated scenario. SCAQMD staff recommends using the new CARB Fuel Requirements that will take affect in 2009 (0.5% or less fuel sulfur content) and 2012 (0.1 fuel sulfur content) for the unmitigated scenario calculations in the Final EIS/EIR. The assumptions for both the mitigated and unmitigated scenarios should be clearly specified in the Final EIR.

Cargo Handling Equipment Peak Daily Assumption. Table A.1.3-Alt1M-31 in Attachment A-1.3 provides a footnote stating that the gate peak daily TEUs were “reduced 50% to simulate that half of the gate throughput is not handled by CHE. This reducing factor is necessary to prevent overprediction of CHE usage for the entire terminal.” It is SCAQMD staff’s understanding that

all gate throughput is handled by cargo handling equipment. SCAQMD staff requests clarification of this assumption in the Final EIR and supporting information to show the lead agencies are not under estimating the peak daily cargo handling equipment emissions.

Total Container Berth Length. Page 1-41, Table 1.6-4 Project Operations Summary of the DEIS/EIR indicates a decrease in total container berth length from 4,590 LF in 2010 to 2,900 LF in 2015. In addition, operating berths are decreased from 5 berths to 4 berths. However, the total TEUs and annual vessel calls increase by over 500,000 TEUs and 50 annual vessel calls from 2010 to 2015, respectively. SCAQMD staff requests clarification of the throughput increase in the Final EIS/EIR when almost half of the total container berth length is unavailable with one less operating berth.

Average Daily Truck Trips. Page 1-41, Table 1.6-4 Project Operations Summary of the DEIS/EIR indicates a decrease in average daily truck trips with a dramatic increase in annual trains from year 2010 to 2015. SCAQMD staff requests clarification on the decrease in truck trips and the dramatic increase in annual trains from year 2010 to 2015.

Health Risk Assessment. Information on how emissions were assigned to air dispersion modeled sources and justification for the source parameters (width, height, initial vertical and horizontal dimensions, etc.) were not provided for construction. Since this information was not provided, SCAQMD staff could not verify that the correct emissions were used in the model or that the source parameters used were correct for construction. The Final EIR should include this documentation. The documentation should be sufficient for the public to verify that the emissions and source parameters are correct.

In addition, detailed information on the allocation of operational emissions to sources and justification for operational source parameters was not supplied for HRA sources. SCAQMD staff is assuming that operational emissions allocation and source parameters are the same as the criteria pollutant analysis. If this is not the case, then the Final EIR should include documentation on how the operational emissions were allocated to sources and how source parameters were developed in a way that the public can verify that this was done correctly.

Lastly, the sources for construction do not appear to be sized appropriately. An Excel file, Middle Harbor - Const Emissions - DPM (Alt1-Alt2-NEPA).xls, was provided that listed widths of the construction sources. The width of source S7 is listed as 700 meters; however the initial horizontal dimension is listed as 700 meters in the modeling file. Since the initial horizontal dimension is either the length of side divided by 4.3 or 2.15 depending on whether the volume source is a single source or adjacent to another source, the width modeled would be either 1,503 or 3,010 meters. This and other width appear to be much greater than the widths assigned to construction sources in the AQIA. The construction sources in the HRA and AQIA should be made consistent in the Final EIR.