



South Coast Air Quality Management District

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September 22, 2004

Dr. Robert Kanter
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The Port of Long Beach
P.O. Box 570
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Proposed Pier J South Terminal Development – The Port of Long Beach

The South Coast Air Quality Management District (AQMD) staff received your letter dated September 9, 2004. We first were notified of this letter by a reporter from the Los Angeles Times. An official copy of this letter was not received by my staff until September 21, 2004. We strongly disagree with numerous statements in your letter and your comments in Los Angeles Times article dated September 16, 2004.

The AQMD staff's position remains consistent that emission estimates from the proposed Pier J project are underestimated. The AQMD staff has commented in writing on October 8, 2003 and July 30, 2004, and at the Long Beach City Council Meeting on September 14, 2005 that application of a 75 percent emission reduction underestimates emissions from heavy-duty vehicles and engines. This 75 percent emission reduction rate is for new model year heavy-duty vehicles and engines, and is not representative of the entire fleet average emissions.

The AQMD staff understands that the 75 percent emission reduction rate was applied as mitigation for onsite equipment and off-site trucks as presented in the Air Quality Analysis in the FEIS/EIR. AQMD staff DID NOT approve the 75 percent emission reduction applied to account for the EPA's regulations on new, heavy-duty vehicles and engines. In your response to comments in the FEIR, the Lead Agency has indicated that the 75 percent emission reduction was used based on the AQMD staff's advice. This is simply untrue. AQMD staff has been consistent in its guidance on all CEQA projects that emission calculations should only reflect the implementation of adopted rules and/or committed mitigation measures. It is the AQMD staff's understanding that the Pier J project contains no such requirement that only post-2007 model year heavy-duty vehicles and engines would be used and thus support a 75 percent emission reduction assumption.

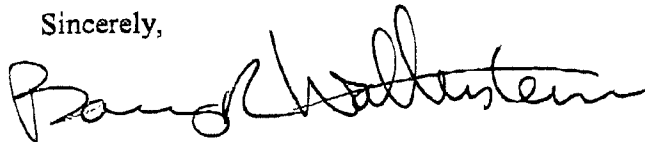
Marine ports are one of the largest sources of air pollution in the South Coast Air Basin (Basin). Because of the variety and magnitude diesel mobile sources affiliated with port activities, the ports pose a significant health risk to residents in the Basin. Moreover, the ports are the only large source in the Basin where emissions are significantly increasing.

The need for implementing mitigation measures to reduce or eliminate air quality impacts and exposure to diesel particulate is imperative. The AQMD staff understands that this proposed project is the first in a series of port-related projects. Thus, the need to implement all feasible mitigation measures is paramount to ensure that as the port expands air quality and health impacts do not significantly worsen in an already impacted area.

In addition, at the Long Beach City Council meeting on Tuesday, September 14, 2004 the City Council requested additional information regarding emission estimates and the feasibility of mitigation measures. Attached is additional information that further substantiates that the air quality analysis in the FEIS/EIR for the Port of Long Beach Pier J South Terminal Development is deficient as it underestimates emissions and lacks a commitment to implementing all feasible mitigation measures. The AQMD staff strongly recommends that the Port of Long Beach and the Long Beach City Council reconsider the certification of the FEIR for the Pier J project and make appropriate amendments suggested herein to ensure that requirements under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) are fully addressed.

If you have any questions, please contact me at (909) 396-3131.

Sincerely,



Barry R. Wallerstein, D.Env.
Executive Officer

BRW:EC:SN

**Attachment I
 Emission Estimates**

Ships

The Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) for the Port of Long Beach Pier J underestimates the emissions from ships. According to the FEIS/EIR, the emission calculations for ships were based on the 1999 Arcadis Marine Vessels Emissions Inventory Study (Arcadis) which was also the basis for the AQMD's emissions inventory in the 2003 Air Quality Management Plan (AQMP). However, AQMD staff's review of the FEIS/EIR (Tables A.2-7 and A.2-16) has indicated that emissions from cruising operations outside the precautionary zone were not included in the total emissions from ships, and only emissions from cruising (as well as maneuvering and hotelling) within the precautionary zone were included. Cruising emissions beyond the precautionary zone impact the Basin's regional air quality and should be accounted for in the air quality impact analysis for the Pier J FEIS/EIR. As a result, the ship emissions associated with the annual 125 calls are underestimated in the EIR and should be revised to include the cruising emissions within the South Coast Air Basin over-water boundaries. In addition, it would be more appropriate to estimate the impact of larger container vessels (anticipated in the future) on emissions particularly due to larger diesel engines and longer hotelling times.

The following table compares the estimates from the FEIS/EIR with those calculated by AQMD staff using the recent POLA Emissions Inventory Study and the Arcadis Study. The emission estimates for the POLA Emissions Inventory Study and the Arcadis Study are based on an average tons per call emission rate from each study expanded out to 125 calls per year.

Source	Emissions for 125 Container Vessel Calls		
	NOx (tons/yr)	PM (tons/yr)	SOx (tons/yr)
FEIR	101.6	4.7	66.2
Arcadis ¹	262.5	22.5	193.8
POLA ¹ Inventory	337.5	27.5	200.0

1. Does not include tug boats

Trucks

The FEIS/EIR estimates the emissions from off-terminal heavy-duty diesel trucks by projecting 1,243 truck trips per day that will travel 15 miles per truck trip. The assumption for a 15 miles per truck trip appears to be low given that trucks carrying port-related cargo travel to and from inland counties (where most of the distribution centers and warehouses are located), could travel much farther than the 15 miles estimated in the FEIS/EIR. In addition, as previously commented it is inappropriate to mitigate off-site

truck emissions with an across the board 75% reduction in emissions without a mitigation measure to support such a reduction.

Cargo Handling Equipment

The FEIS/EIR's projected population and activity level (i.e., hours of operation) for cargo handling equipment seems low for the size of the Pier J container terminal. Based on the average number of cargo handling equipment per acre of container terminal (derived from the POLB 2002 Baseline Emissions Inventory Study), the 17 pieces of cargo handling equipment assumed for the 115 acres in PIER J appears low. Accordingly, we have estimated the required number of cargo handling equipment for Pier J to be: 58 yard tractors, 8 top handlers, and 4 side picks. In addition, the daily operating hours for yard tractors were assumed to be 4 hours in the FEIS/EIR, while average operating hours for yard tractors in the POLB study was 7 hours per day. As a result of the population and activity assumptions, the estimated emissions from cargo handling equipment in Pier J were underestimated. As with the truck emissions estimates, the AQMD staff considers it inappropriate to assign an across the board 75% reduction factor to cargo handling equipment.

Attachment II Mitigation Measures

1) Truck Idling Facilities

a) Restrict operation to "clean" trucks

AQMD Rules 1191 (Clean On-Road Light- and Medium-Duty Public Fleet Vehicles) and 1196 (Clean On-Road Heavy-Duty Public Fleet Vehicles) applies to all government agencies that operate truck fleets. These rules require the use and implementation of cleaner technologies and fuels. These rules do not apply to privately owned trucks. Please refer to these rules for more detailed applicability.

Over the FY 1998-2003 over 580 heavy-duty natural gas trucks have been funded through the Carl Moyer Program and MSRC.

b) Electrify service equipment at facility

Truck idling at ports, truck stops, and distribution centers can be reduced by providing electrical shore power to trucks from the grid or on-site power generation. This can be used for both the cab compartment of the trucks and also the trailer refrigeration units (TRUs). Currently there are three manufacturers of truck stop electrification equipment: Idleaire, Shurepower, and Air Power Systems.

CARB has developed airborne toxic control measures for TRUs, which will be in effect starting December 2008. AQMD's AQMP control measure includes truck stop electrification; the implementation date for which is 2007.

AQMD staff is currently considering implementing truck stop electrification projects along the I-5 corridor.

c) Provide electrical hook-ups for trucks that need to cool their load

Please refer to Section 1(b).

d) Electrify auxiliary power units

Auxiliary power units (APUs) are used to provide power for both the cab compartment of the trucks and also the TRUs. Currently there are on-board battery based technologies available that can provide power to the cab compartment without idling the diesel-fueled APU or the main truck engine. Idling Solutions produces a battery based APU to provide HVAC to the cab compartment. In general, the power requirements of TRUs are much more than that of the cab compartments, and on-board battery based APUs are not available for TRUs.

CARB's ATCM (Section 1(b)), requires the use of "clean" APUs. AQMD staff is currently working with U.C. Davis to develop a fuel cell APU for TRUs.

e) Use "clean" street sweepers

AQMD Rule 1186.1 (Less-Polluting Sweepers) requires the use of cleaner fuels and technologies for street sweepers owned and operated by the government. Please refer to this rule for more detailed applicability. There are currently 135 rule compliant street sweepers operating in Southern California.

f) Require or provide incentives to use low-sulfur diesel fuel with PM traps

Generally, under incentive programs such as the RECLAIM EO, Carl Moyer, Rule 1121, etc., the technologies used to mitigate and/or offset emissions need to be CARB verified. Currently PM traps manufactured by Engine Control Systems, Johnson Matthey, Donaldson, and Cleaire are CARB verified for Level 3 (>85%) PM reduction for on-road applications. These traps are not verified for off-road purposes. CARB has also verified a Donaldson diesel oxidation catalyst (DOCs) for Level 1 (>25%) PM reduction for on-road applications. The use of ultra low sulfur diesel (<15 ppmw sulfur) is necessary for these PM traps and DOCs.

AQMD is implementing several incentive program projects to install PM traps on school buses, and on-road vehicle fleets operated by cities and municipalities. AQMD and EPA are currently conducting a demonstration project at the Port of Long Beach by installing DOCs on yard hostlers. The AQMD staff has been informed by the Ports of Los Angeles and Long Beach that several hundred DOCs have been installed on yard hostlers under port programs. The AQMD staff presented a Draft White Paper titled, "Feasibility Study for Controlling Emissions From Yard Tractors," which was released for public review in April 2004.

2) Ship Hotelling at Local Ports

a) Require the use of land-based power when berthed

Cold ironing ships while berthed at the ports reduce significant quantities of NO_x, SO_x, PM, and toxics emissions. Currently China Shipping has cold ironed one of their berths. According to the Port of Los Angeles, the cost of this cold ironing project was approximately \$5 million, and it can accommodate two ships. As reported by the Port of Long Beach, BP ARCO will be cold ironing two tankers at the port starting in 2006.

Ships are also being cold ironed in Pittsburg, California (POSCO vessels) and in Juneau, Alaska.

When ships are berthed, they require both electrical power and steam. Cold ironing can reduce the idling of ICEs required to provide electrical power, but boilers are required

to produce steam. So, ships may still use boilers while being cold ironed. To reduce/eliminate the use of boilers to produce steam, steam must be supplied from an on-site source.

- b) Limit the sulfur content of fuel used by ships in South Coast waters

CARB is developing an ATCM to require the use of ultra low sulfur diesel (ULSD) in captive harbor craft operating in California.

IMO's Annex VI has a provision for establishing SOx Emission Control Areas (SECA) that can limit the sulfur content of fuels used in marine vessels.

- c) Install add-on DPM control device on diesel-fueled auxiliary engines and boilers

The development of DPFs for this purpose would essentially be the transfer of technology from on-road applications to the marine vessel area. However, as mentioned before, ULSD must be used with DPFs.

3) Train Idling

- a) Change Railroad Operating Practices

Both line-haul and switcher locomotives idle for a significant portion of the total operating time. It is estimated that switcher locomotives can idle for about 60% of the total operating time thereby wasting fuel and contributing to large amounts of NOx, SOx, PM, and toxics emissions. The reducing of idling time can significantly reduce emissions and contribute towards fuel savings.

Commercially there are about five manufacturers of idle control systems. These systems typically cost \$12,000 - \$16,000 per locomotive. These systems turn the locomotive engine on and off based on the temperature of the engine coolant. If the temperature of the coolant drops below a certain temperature while the engine is off, the idle control system automatically turns the engine on. In colder climates, a smaller auxiliary engine is used to keep the coolant warm so the main engine can be turned off by the idle control system. Typically, in Southern California the use of this auxiliary engine is not necessary. Idle control systems have been installed on Union Pacific locomotives in Roseville, California.

For an average locomotive, the cost of the idle control system can be recouped in about 3 years from fuel savings.

- b) Idle Reduction Technologies

Please refer to Section 3(a).

Attachment II
Mitigation Measures

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c) Other Engine Technologies

Modifying fuel injection systems, engine timing, compression ratios, etc. can be used to reduce emissions from diesel-fueled locomotives. EPA has requirements for locomotive engines in 40 CFR Part 92. Recently, EPA posted an Advance Notice of Proposed Rulemaking (APRM) for Part 92 in the Federal Register. AQMD staff commented on this APRM and also on Part 94 APRM (marine vessel engines). Please refer to the attached document for AQMD's comments on this APRM, which includes development of technologies and approaches to reduce emissions from locomotive and marine vessel engines.

Locomotive engines are used for many years, and in many cases switcher locomotive engines can be 25-30 years old. These older and dirtier engines can be re-manufactured to much cleaner emission standards approaching close to Tier II emission levels. General Motors and General Electric have retrofit kits that can be used for this purpose. Under AQMD incentive programs, approximately six locomotive engines are being re-manufactured.