



South Coast
Air Quality Management District
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E-mailed: October 15, 2010
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Mr. Cy R. Oggins
California State Lands Commission
100Howe Avenue, Suite 100-South
Sacramento, CA 95825

Review of the Draft Environmental Impact Report (Draft EIR)
for the Chevron El Segundo Marine Terminal Lease
Renewal Project

The South Coast Air Quality Management District (AQMD) appreciates the opportunity to comment on the above-mentioned document. The following comments are intended to provide guidance to the lead agency and should be incorporated into the final Environmental Impact Report (EIR) as appropriate.

Based on a review of the draft EIR the AQMD staff is concerned that the lead agency may have underestimated air quality impacts from the proposed project. Throughput at the facility is expected to increase by 40% with project implementation, however it is not clear how this increase is consistent with emission reductions required by the Air Quality Management Plan or the AB 32 Scoping Plan. In addition, the cumulative impacts from increasing throughput at the refinery that the marine terminal serves have not been presented to the public. Lastly, project emissions associated with 500 vessel trips per year within South Coast air basin waters are not included in the health risk assessment. Additional details are provided in the attachment to this letter.

In addition to the potential underestimation of air quality impacts, the lead agency has not specified sufficient mitigation to reduce the significant air quality impacts and health risks from this project. Further mitigation is needed to reduce the air quality impacts, health risks, and greenhouse gases associated with the project's vessel emissions.

Pursuant to Public Resources Code Section 21092.5, please provide the AQMD with written responses to all comments contained herein prior to the adoption of the final EIR. Further, staff is available to work with the lead agency to address these issues and any other questions that may arise. Please contact Dan Garcia, Air Quality Specialist CEQA Section, at (909) 396-3304, if you have any questions regarding the enclosed comments.

Sincerely,

A handwritten signature in black ink that reads "Ian V. MacMillan". The signature is written in a cursive, slightly slanted style.

Ian MacMillan
Program Supervisor, CEQA Inter-Governmental Review
Planning, Rule Development & Area Sources

Attachment

IM:DG

LAC100901-01
Control Number

Cumulative Impacts

1. The project description in the Draft EIR indicates that throughput from this facility is expected to increase approximately 1% per year through 2040, for a total increase of approximately 40% over baseline. This increase in throughput would directly result in an increased output from the Chevron refinery that is served by this marine terminal, however the cumulative effect of this increase has not been disclosed in this Draft EIR, or in any other EIR of which AQMD staff is aware. This facility is one of the largest stationary sources within the South Coast air basin, and an increase of 40% likely represents a significant impact that has not been analyzed cumulatively under CEQA. The lead agency should include the cumulative impact of facility-wide emissions over the life of the lease prior to certifying the Final EIR.

Vessel Emission Reductions

2. AQMD staff is concerned that no mitigation measure was found in the DEIR for main and auxiliary engine controls for vessels serving this facility. The lead agency should require as a condition of the lease that the vessel fleet that serves this marine terminal meet the IMO 2016 Tier III standards over an accelerated phased in schedule, starting as soon as the lease is approved. As the facility operator owns and operates many of the vessels that call on the marine terminal, the project proponent should also commit to upgrading its own fleet as soon as possible.

AQMD staff notes that many feasible emission control technologies are available today. For example, 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 AQMD staff.

List of Feasible Controls

Control	Control Details	Estimated Emission Reductions		
		PM	NOx	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 NOx emissions and 20-30% reduction in PM emissions are available from Mann, one of the leading marine engine manufacturers. These slide valves have been installed on several ocean-going vessels and are being demonstrated as part of a joint effort with the California Air Resources Board (CARB). Water injection, emulsified fuels, or humid air are established technologies 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.profu.se or can be obtained from the SCAQMD staff.

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

Consistency with the AQMP and the AB 32 Scoping Plan

3. It is not clear to AQMD staff how the Draft EIR has demonstrated that the project will be consistent with either the Air Quality Management Plan or the AB 32 Scoping Plan. Both plans require *reductions* in direct emissions from the facility, as well as from the transportation sector that is the main consumer of fuel produced from this facility. The projected 40% increase in throughput does not appear to be consistent with either of these plans. AQMD staff encourages the lead agency to provide a more robust analysis of how this project will impact the implementation of these plans. If the project is found to inhibit the implementation of either plan, all feasible mitigation measures should be considered that would reduce the severity of this impact.

Operational Emissions Calculations

4. In chapter 2.0 (Project Description) of the draft EIR the lead agency describes the travel patterns and operational activities for tankers destined for the Chevron El Segundo terminal. Specifically, the lead agency states that tankers may be diverted to the federal anchorages (identified in Figure 2-2) located immediately west of the Marine Terminal berths and alternatively to the anchorages located just outside of the Port of Los Angeles or Port of Long Beach (identified in Figure 2-7) to wait and handle cargo and stores. The tankers then move to the marine terminal after the mooring is open and they may proceed directly to berth. The emission associated with vessel emission at these four anchorages was not included in the Draft EIR air quality analysis or the Health Risk Assessment (HRA). AQMD staff recommends that the lead agency revise the analysis to include these emissions prior to certifying the Final EIR.
5. The lead agency states that vapors displaced during cargo loading operations may be captured by auxiliary barges fitted with vapor recovery equipment. However, it does not appear that the lead agency included the emissions associated with these auxiliary barges in the regional air quality analysis or the HRA. Therefore, AQMD staff requests that the lead agency revise the air quality analysis and HRA to include the emissions from any auxiliary barges.
6. In the HRA, the lead agency did not include emissions associated with vessels traveling within the South Coast air basin. They rely on the rationale from a previous EIR that states that emissions generated from 9 extra tankers per year will be dispersed to such a great extent that they do not need to be included in the HRA. This rationale is not appropriate for the current project that includes approximately 500

tankers per year, two tug boats and one auxiliary barge per tanker at berth, in addition to two ships hotelling at two berths and four anchorages. The HRA should be updated to include the emissions from all vessel activity within the South Coast air basin.

Cancer Risk Mitigation Measures

7. The lead agency's health risk assessment demonstrates significant cancer risk impacts of 18.6 cases per million for the proposed project. Further, the lead agency's cumulative air quality analysis demonstrates significant air quality impacts; therefore, AQMD staff recommends that the lead agency revise the air quality mitigation measures in the final EIR to further reduce the health risk and overall cumulative air quality impacts from the proposed project. Specifically, AQMD staff recommends that the lead agency revise air quality mitigation measures one (MM AQ-1) as follows:

- MM AQ-1 **A. Low Sulfur Fuels in Marine Main and Auxiliary Engines.** Starting at the beginning of the new 30-year lease period and continuing throughout the 30-year lease period, all main and auxiliary engines on crude oil marine tankers calling at the Chevron EL Segundo Marine Terminal shall use marine diesel oil or marine gas oil with a maximum of ~~0.2~~ 0.1 percent (%) sulfur by weight. In the event that marine diesel oil or marine gas oil with maximum 0.1 percent sulfur by weight content is not available then tankers shall use marine diesel oil or marine gas oil with maximum 0.2% sulfur by weight content. This measure shall apply while the tankers are within ~~20 (37.0-74 kilometers)~~ of Point Fermin waters of the South Coast Air Basin as defined in AQMD Rule 1142, including while hotelling or transferring product at the Marine Terminal.
- i. B. All marine tankers calling at the Chevron El Segundo Marine Terminal shall reduce speed to 12 knots within waters of the South Coast Air Basin as defined in AQMD Rule 1142.

8. In addition, the lease agreement or permit should mandate the performance of an annual analysis of crude oil and product throughput. The AQMD staff urges the lead agency to establish requirements in the lease providing that if the analysis shows the throughput is above levels assumed in the Final EIR, additional mitigation measures will be required.

Greenhouse Gas Mitigation Measures

9. Mitigation measure AQ-2 requires the project proponent to implement a program to quantify and reduce greenhouse gas (GHG) emissions. However this program does not contain any performance standards, emission targets, or feasibility standards. Without these standards, the mitigation measure does not have any enforceable mechanism to actually reduce GHG emissions from this project. As the 1.3 million tons of CO₂e per year from the operation of this single project (excluding emissions from the Chevron refinery) is a substantial portion relative to the entire state transportation budget of 175 million tons in 2008, the lead agency must ensure that enforceable measures are in place to reduce greenhouse gas emissions.