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March 30, 2018

Mr. Christopher Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, California 90731

Dear Mr. Cannon:

Thank you for providing the California Air Resources Board (CARB) the opportunity to comment on the City of Los Angeles Harbor District's (LAHD) Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration (MND) for the Berths 238 – 239 [PBF Energy] Marine Oil Terminal Wharf Improvements Project (Project). Based on the MND, LAHD has determined that the proposed Project will not cause significant air quality or other negative impacts on the environment after implementation of their mitigation measures.

However, to align with the goals of California's Sustainable Freight Action Plan, the State Implementation Plan, and CARB efforts to reduce vessel at-berth emissions, we encourage the LAHD to design the new terminal and associated infrastructure to accommodate zero or near-zero emissions technology. Incorporating the suggested measures outlined in this letter into the terminal design plan at this point in time would be the most cost-effective method to implement these measures in the proposed Project.

Project Description:

The proposed Project is located within the Port of Los Angeles boundaries. It consists of various wharf improvements to Berth 238 and 239 on Marine Oil Terminal SWT-I, in order to comply with the California State Lands Commission's Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). MOTEMS are comprehensive engineering standards for the analysis, design, inspection, and maintenance of existing and new marine oil terminals.

In general, the proposed Project would replace existing Berth 238 with a brand new Berth 238 (New Berth 238) wharf, followed by the demolition of Berth 239. Improvements associated with the new loading platform at Berth 238 includes an access ramp, berthing and mooring dolphins, landside mooring anchors, catwalks, topside equipment, landside piping, and other necessary utilities to support operations

at Berth 238. In addition, the proposed Project would also include a new long-term (30 year) lease to reflect on the updated owner of the facilities previously owned by Exxon Mobil.

General Recommendations:

1) CARB staff (Staff) is currently considering folding into the Ocean-going Vessels At-Berth Regulation (At-Berth Regulation) additional vessel types not currently covered, including tankers. Tankers are a high priority for California's efforts to reduce air emissions because they are a large emissions source while at-berth, both statewide and in the South Coast Air Basin. CARB's statewide emissions inventory indicate tankers now contribute more at-berth carbon dioxide (CO_2) and particulate matter (PM) emissions than any other vessel type, and are the second largest source of at-berth nitrogen oxides (NOx) emissions after container ships. Emission reductions are necessary from this source to attain ambient air quality standards and to better protect nearby communities from the harmful effects of fine PM. Therefore, Staff recommends LAHD to explore the adoption of the following alternative emissions control measures and include them in your design plans prior to construction instead of conducting retroactive fixes that may run into difficulties of already established infrastructure.

2) Given the availability of alternative emissions reductions technologies such as the following: (1) Capture and control systems, (2) shore-side electric booster pumps, and (3) shore-side (grid-based) power, LAHD and PBF Energy should consider including these technologies in their design plans. Staff also encourages the Port to continue to explore new control strategies in addition to the ones described here.

   With regard to the first control strategy, capture and control systems are already in use for container ship auxiliary engines that could potentially be scaled up to accommodate the combined emissions from tanker boilers and auxiliary engines. In this case, a barge with the system would be towed to a position alongside the vessel, where the capture and control equipment would be connected to the vessel with a barge-mounted crane. Another capture and control option would consist of a land-based system where the emission control devices and ducting system are located on the wharf. There are two projects under development that will be using this type of system. For either type of capture and control system, it would be easier to construct a new terminal designed to accommodate these systems (loading on the wharf from the barge or on-land equipment, footprint for the land-based system, etc.), rather than retrofitting later.

With regard to the second control strategy, the electric booster pump, a land-based pump could be used to reduce the load on the vessel boiler or other diesel-powered driver for the vessel pumps used to offload crude or other products. For this option, there would need to be an adequate footprint at the terminal or nearby for the electric motor and pump, and the electrical capacity to provide the necessary power. Even if the electric motor and pump are not included as part of the proposed Project itself, it may be worthwhile to provide space for this option in case it is pursued at a later time.

Finally, shore-power may be an option for the terminal if the operator expects to receive vessels that visit frequently, especially if they use electrically-driven pumps to offload their product. At this early stage in developing the Project, the terminal has the opportunity to better plan the layout of vaults, conduits, and electrical lines around the physical restrictions of the berth layout.

3) In section 4.3 of page 4-9 of the report, there is a discussion on lease measure AQ-1 which Staff is pleased to see that the LAHD is encouraging the testing of at-berth control technologies at this facility. As mentioned above, Staff is working on amendments to the At-Berth Regulation which are expected to address the emissions from new categories of vessels including tankers. While some of the potential control technologies for tankers, such as shore-power and shore-side electric booster pumps are already demonstrated, other technologies such as capture and control systems, are not yet used for tanker vessels, and pilot tests would be very helpful here.

   Staff appreciates the inclusion of the voluntary mitigation measure, however Staff has concerns with some of the terms of lease measure AQ-1, which could conflict with our regulatory efforts. Lease measure AQ-1 includes a statement that cost-effectiveness values for control systems exceeding $18,262/ton (from the Carl Moyer Program) shall not be considered feasible. We do not believe this cost-effectiveness threshold is appropriate for several reasons. First, the cost-effectiveness value for the Carl Moyer Program is for a different purpose – a funding program. Staff notes that the estimated cost-effectiveness values for the current At-Berth Regulation, as estimated in the staff report, significantly exceeded this threshold (see page X-19 here: https://www.arb.ca.gov/regact/2007/shorepwr07/tsd.pdf).

   Also, the current cost-effectiveness threshold under the Carl Moyer program is now $30,000/ton, or up to $100,000/ton for advanced technology projects. Further, PM emissions are weighted at twenty times under Carl Moyer, meaning

that the allowable costs can be commensurately higher for PM control strategies, while the AQ-1 measure specifically states that there is no pollutant weighting. In addition, measure AQ-1 lays out a timeline for pilot studies and eventual use of control technologies that could potentially far exceed 5 years. CARB staff is currently working with all stakeholders in developing amendments to the At-Berth Regulation, which includes implementation timelines for the potential regulatory requirements. It is possible that the timelines in AQ-1 could conflict with the implementation schedule that Staff will ultimately propose for the At-Berth Amendments.

4) In table 4.3-4 of page 4-17 of the report, the peak daily operational emissions for the 2032, and 2048 baseline totals are compared with the 2016 baseline total emissions. The net difference ("Project Minus CEQA Baseline") with the 2016 baseline is compared with the significance thresholds shown on table 4.3-1 in page 4-11 of the report. LAHD should provide emissions estimates for the interim period between 2016 and 2032.

5) LAHD should clarify the timeline and dates for the start and completion of construction, followed by the operation start date and estimated date when the berth would reach full build. In addition, LAHD should analyze emissions associated with construction emissions that overlap with the emissions associated with new berth operations, if new operations commence prior the completion of construction activities.

Closing

CARB staff appreciates the opportunity to comment on the NOI for the proposed Project. We hope the LAHD will take advantage of this opportunity to incorporate alternative technologies into the design, or the capability to design the Project to allow easy installation of these new and innovative technologies in the future.

Please include CARB on your State Clearinghouse list of selected State agencies that will receive the final MND, as approval of your project. If you have any questions, please contact Ms. Angela Csondes, Manager, in our Marine Strategies Section, at (916) 323-4882 or via email at: angela.csondes@arb.ca.gov.

Sincerely,

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