PORT OF OAKLAND

January 31, 2019

Angela Csondes
Manager, Marine Strategies Section
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812-2815
Submitted Via Electronic Comment Log

Subject: Comments on Preliminary Draft Health Risk Assessment ("HRA") for the Proposed Control Measure for Ocean-Going Vessels At Berth and At Anchor

Dear Ms. Csondes:

The Port of Oakland ("Port") appreciates the opportunity to comment on the Preliminary Draft HRA posted November 5, 2018, for the Proposed Control Measure for Ocean-Going Vessels At Berth and At Anchor ("Proposed Control Measure"). The Port understands that the California Air Resources Board ("CARB") is planning for the Proposed Control Measure to replace the current Airborne Toxic Control Measure ("ATCM") for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At Berth in a California Port (the "At-Berth Regulation"), with the goal of taking the Proposed Control Measure to the CARB Governing Board in December 2019. CARB posted the text of the Proposed Control Measure on August 31, 2018. The November 5, 2018, Preliminary Draft HRA and associated air dispersion modeling files that CARB released December 14, 2018, were prepared in support of the Proposed Control Measure.

The Preliminary Health Analyses document contains two types of assessment, 1) an HRA using air dispersion modeling and impacts estimation guidance from the California Environmental Protection Agency Office of Environmental Health Hazard Assessment ("OEHHA") and 2) an Incidents per Ton ("IPT") analysis.

The Port supports CARB's ongoing efforts to reduce emissions from ocean-going vessels ("OGV") at berth and is working diligently to maximize the number of vessel visits using shore power. Port staff work collaboratively with shipping lines to provide education and resources about the shore power program. Port staff also track shore power usage in real time, collecting

detailed information from marine terminal operators and posting that information on the Port's web site for public information purposes.[1]

The key input to the Preliminary Draft HRA is the estimated emissions from vessels at berth, which are not yet final. Emissions estimates need to be final and the Preliminary Draft HRA updated before the Preliminary Draft HRA results can be used.

CARB conducted two HRAs addressing only the Ports of Long Beach and Los Angeles together and the Richmond Complex. CARB's use of AERMOD and the 2015 OEHHA Risk Assessment Guidelines for HRAs represents current best practices. However, the robustness of the findings is limited by the emissions estimates. Emissions estimates are typically completed before the HRA but in this case are open for public comment and discussion through the end of February 2019, at which point they may be refined.

The air dispersion model AERMOD, which CARB selected for the Preliminary Draft HRA is the preferred model from the US Environmental Protection Agency. Required inputs to AERMOD include meteorological data, emissions information for each pollutant considered, and exhaust parameters for release points. Of these inputs, the estimated emissions are key, since emissions have a direct linear relationship with the estimated ambient concentrations and health impacts from each source.

On November 5, 2018, CARB posted the Preliminary Draft HRA. CARB then posted a hard-coded spreadsheet of "Draft At Berth Emissions Estimates" used in the Preliminary Draft HRA on November 9, 2018, and air dispersion modeling files in mid-December with a public comment period for the Preliminary Draft HRA closing January 31, 2019.

CARB also posted the "Draft: 2018/2019 Update to Inventory for Ocean-Going Vessels: Methodology and Results"—for the emissions that were entered into the Preliminary Draft HRA—on January 16, 2019, with a separate public comment period for the emissions methodology and results closing February 16, 2019.

Without greater understanding of the emissions used as data inputs to the air dispersion model and risk estimation calculations, the utility of the Preliminary Draft HRA is limited. Port staff are reviewing the emissions methodology released on January 16, 2019, and are comparing it with the spreadsheet posted November 9, 2018. Port staff look forward to discussing the emissions with CARB staff at the public workshop CARB scheduled for February 26, 2019. After that, Port staff anticipate the need for a revised HRA for the Proposed Control Measure that relies on emissions that have been reviewed and understood by all parties.

The AERMOD input and output files and risk estimation databases CARB provided on December 14, 2018, appear to carry out the methodology discussed in the Draft Preliminary HRA, but further review is not warranted until emissions are finalized. In addition to the

[1] https://www.oaklandseaport.com/development-programs/shore-power/

wharfinger information provided by the Port to CARB annually as required by grant funding obligations, Port staff are happy to work with CARB staff to refine assumptions made in the emissions estimates.

The role of the Preliminary Draft HRA posted November 5, 2018, in rulemaking for the Proposed Control Measure is not clear.

The Proposed Control Measure is not an ATCM, in fact its stated purpose is to reduce NOx, PM, and GHG but not the toxic air contaminant DPM—which is the focus of the Preliminary Draft HRA. The inclusion of an HRA for any of the ports in California is therefore not a fundamental driver of the Proposed Control Measure (leaving the CARB Governing Board direction, Mobile Source Strategy, and Sustainable Freight Action Plan as drivers). Thus, any reductions in risk shown in the Preliminary Draft HRA are purely informational. Indeed, CARB's elimination of the At-Berth Regulation ATCM by focusing on a Proposed Control Measure for NOx and PM but not DPM seems to imply that no further risk reductions are required.

The Preliminary Health Analyses report announces that the risk reductions of the Proposed Control Measure are "significant," a term defined in the California Environmental Quality Act ("CEQA") and used in CARB's Certified Regulatory Program, but not defined in the CARB rulemaking process. While CARB staff present the percentage of reduction in risk of the Proposed Control Measure over the current At-Berth Regulation, the total residual risk should be compared to that of other source categories to prioritize the need for the Proposed Control Measure.

Health impacts from Criteria Air Pollutants are managed through SIP Planning, which does not require a new Proposed Control Measure for the container fleet.

$PM_{2.5}$ is a criteria air pollutant, not a toxic air contaminant, and the California Ambient Air Quality Standards ("CAAQS") and National Ambient Air Quality Standards ("NAAQS") are the appropriate health-protective standards for $PM_{2.5}$. Regional ambient air concentrations of $PM_{2.5}$ are managed to levels below the CAAQS and NAAQS through SIP planning. Even so, CARB's Mobile Source Strategy calls for an evaluation of emissions reductions from currently unregulated fleets, not the already regulated container fleet which calls Oakland. Thus, SIP planning for $PM_{2.5}$ attainment does not mandate an amended At-Berth Regulation to reduce statewide emissions through an "every vessel, every visit" control strategy like CARB staff have proposed.

The Incidents Per Ton ("IPT") methodology presented for $PM_{2.5}$, a criteria air pollutant, is not a cost effectiveness metric.

The IPT methodology provides information on health effects assuming ambient $PM_{2.5}$ concentration is the sole contributor to adverse health effects, with a direct linear relationship. The IPT methodology is not, however, part of a cost-effectiveness evaluation. CARB released a "Preliminary Cost Information" document in August 2018 as part of this rulemaking effort,

which relies on the same assumptions as the emissions inventory (which, as discussed above, may need refinement). The preliminary costs data evaluated total costs of the Proposed Control Measure, but not cost effectiveness of proposed measures calculated in terms of cost per ton of emissions removed. CARB has also not yet prepared a socio-economic impact analysis of the proposed rule.

Closing

Port staff are interested in working with CARB to improve the current ATCM focused on DPM to allow for 100% compliance. We look forward to seeing enhanced supporting documentation for the CARB emissions estimates and a revised HRA and cost effectiveness analysis once the emissions are updated.

Please contact Catherine Mukai, P.E., Port Associate Environmental Planner/Scientist at cmukai@portoakland.com with any follow-up questions.

Sincerely,

Richard Sinkoff
Director of Environmental Programs and Planning