

March 29, 2024

Blaine Gilles  
AERAS Technologies, LLC  
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Long Beach, California 90803  
[blaine@aeras-technologies.com](mailto:blaine@aeras-technologies.com)

Dear Blaine Gilles:

California Air Resources Board (CARB) staff have reviewed AERAS's "Request to Amend AERAS Demonstration Plan" (Request). The AERAS-1 system was granted Executive Order (EO) G23293 on December 4, 2023, to treat emissions from container vessel auxiliary engines. CARB approval was based on emissions measurements obtained from testing described in "AERAS-1 System Test Plan" (Test Plan, Revision 3, submitted April 25, 2023, attached). EO G-23-293 specifies approved operating conditions for the AERAS-1 system that are based on the vessels that were tested.

CARB staff met with AERAS on January 25, 2024, to discuss AERAS's request to expand the parameters of EO G-23-293 to be able to service more vessels. Following the meeting, AERAS submitted their Request (Version 1) on January 29, 2024, which proposed testing on container vessels with higher Maximum Continuous Range (MCR) and Operating Load, as well as testing on vessels operating on natural gas fuel. CARB staff provided comments on February 16, 2024, indicating that testing on vessels operating on natural gas fuel was beyond the scope of the Test Plan and additional requirements will be necessary for approval of that portion of their request.

To address CARB staff's comments, AERAS revised and resubmitted their Request (Version 2, attached) on February 19, 2024 (though this letter is dated February 19, 2023). AERAS's Request proposes that Table 10 of the Test Plan be amended to include additional vessel visits. This would enable AERAS to test on vessels with higher MCR and Operating Load than were available during AERAS's initial testing period and seek an amendment of EO G-23-293 should test results show that the AERAS-1 system is capable of meeting the emissions reduction requirements for vessels with these specifications.

### **Stipulations for CARB Approval of AERAS's Request**

Based on CARB staff's review, and pursuant to Health and Safety Code section 93130.5(f) of the 2020 At Berth Regulation, AERAS's Request (Version 2) is hereby approved in accordance with testing requirements under the 2020 At Berth Regulation and the CARB Recommended Emissions Testing Guidelines for Ocean Going Vessels.

CARB approval is based on the system description, design, and operational procedures outlined in the approved Request (Version 2) and Test Plan (Revision 3). No changes or modifications are permitted to the AERAS-1 system without prior CARB approval. In order to

modify EO G-23-293 to reflect the requested changes, AERAS will need to complete all testing outlined in their Request and provide all reports generated from these tests.

The application requirements that AERAS must meet to submit test results are outlined in section 93130.5 of the 2020 At Berth Regulation. Per section 93130.5(i) of the 2020 At Berth Regulation, if testing deviates from the approved Request (Version 2) without prior CARB approval, the Executive Officer may deem the application incomplete or disapprove the application. An example of deviating from the Request includes conducting testing on additional vessel visits beyond those approved in the Request and claiming such visits qualify for the research exception set forth in section 93130.8(d) or 93130.10(e) of the 2020 At Berth Regulation. CARB reserves the right to request the results of any testing conducted beyond the testing described in the approved Request.

To complete the testing outlined in the Request, a total of 10 vessel visits that coincide with the tests specified in the approved Request (Version 2) may count as a compliant visit under the research exceptions in section 93130.8(d) or 93130.10(e) of the 2020 At Berth Regulation; however, these sections only apply for testing identified in the Request and conducted after the date of this letter when the Request was approved. All testing must adhere to the system description, design, and operational procedures outlined in the approved Request (Version 2) and Test Plan (Revision 3).

AERAS is responsible for tracking the usage of the 10 approved vessel visits that may utilize the research exception, and AERAS must provide a copy of the approved Request (Version 2) and Test Plan (Revision 3) to each vessel participating in the research. AERAS is also responsible for communicating with the vessel operator to ensure the operator knows what tests are being performed during the visit and which number out of the 10 approved visits the vessel is participating in. As noted above, any tests completed in excess of those approved in the Request would not be eligible for the research exception to compliance with the 2020 At Berth Regulation set forth in section 93130.8(d) or 93130.10(e). If more than 10 vessel visits are needed to complete all the testing outlined in the approved Test Plan, AERAS must seek additional approval from CARB.

If you have any questions, please contact Angela Csondes, Manager, Marine Strategies Section, at [angela.csondes@arb.ca.gov](mailto:angela.csondes@arb.ca.gov).

Sincerely,



Bonnie Soriano, Chief, Freight Activity Branch, Transportation and Toxics Division

Attachment 1: [240219 AERAS Amendment Request Version 2.pdf]

Attachment 2: [Demonstration Plan\_RATA+PM\_Apr2023 Revision 3.pdf]

cc: Angela Csondes, Section Manager, Marine Strategies Section