

June 27, 2023

Clay Sandidge, CEO
AERAS Technologies, LLC
192 North Marina Drive
Long Beach, California 90803
clay@aeras-technologies.com

Dear Clay Sandidge,

The California Air Resources Board (CARB) staff reviewed AERAS Technologies (AERAS) AERAS-1 System's Test Plan (Test Plan) for the barge-based emissions control strategy to treat emissions from container ship auxiliary engines (Revision 3, submitted on April 25, 2023).

On March 9, 2022, AERAS submitted a draft Test Plan to gain approval for the barge-based AERAS-1 System to be used for compliance with the 2020 Control Measure for Ocean-Going Vessels At Berth (2020 At Berth Regulation or Regulation). CARB staff reviewed the Test Plan and submitted comments to AERAS on April 18, 2022, May 13, 2022, June 27, 2022, and July 5, 2022. To address CARB staff's comments, AERAS submitted a revised Test Plan on June 8, 2022, June 28, 2022, and again on July 14, 2022.

On August 4, 2022, CARB approved AERAS' Test Plan (submitted July 14, 2022) and issued AERAS a Test Plan approval letter. The letter approved a maximum of 12 vessel visits that could utilize the 2017 Advisory Scenario 5 or the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation to complete the testing outlined in the approved Test Plan. The 2017 Advisory Scenario 5 could be used for visits on or before December 31, 2022, and the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation could be used for visits on or after January 1, 2023. The letter stated that if more than 12 vessel visits were needed to complete all the testing outlined in the approved Test Plan, AERAS could seek additional approval from CARB.

On December 6, 2022, AERAS submitted to CARB a formal request for the approval of 8 additional vessel visits to complete the testing outlined in their approved Test Plan. AERAS submitted documentation demonstrating the need for additional visits to complete the required durability and source testing. On January 13, 2023, CARB approved AERAS' request for 8 additional vessel visits, increasing the total number of vessel visits from 12 to 20. CARB required AERAS to submit additional reporting information pertaining to the 8 additional visits.

On February 27, 2023, AERAS submitted an amended Test Plan and requested CARB's review and approval. The amended Test Plan reflected changes to the proposed testing to indicate the types of vessels AERAS would test on. CARB staff reviewed the Test Plan and submitted comments to AERAS on March 8, 2023, and April 5, 2023. To address staff's comments, AERAS submitted a revised Test Plan on April 19, 2023, and April 25, 2023.

On April 17, 2023, AERAS requested additional vessel visits to complete the testing outlined in their amended Test Plan. CARB staff reviewed AERAS' request and submitted comments to AERAS on April 28, 2023, asking AERAS to resubmit their vessel visit request and provide the required data outlined in CARB's January 13, 2023 email which approved the 8 additional vessel visits. On May 1, 2023, AERAS submitted to CARB the request for 6 additional vessel visits to conduct the testing outlined in their amended Test Plan, increasing the number of approved vessel visits from 20 to 26 and submitted the required reporting information outlined in CARB's January 13, 2023 approval. AERAS requested 6 additional vessel visits to complete the required source testing.

Based on CARB staff's review, and pursuant to section 93130.5(f) of the 2020 At Berth Regulation, AERAS' Test Plan (submitted April 25, 2023, Revision 3, attached) 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's Test Plan approval letter (dated August 4, 2022) and AERAS' Test Plan (submitted July 14, 2022) are now considered superseded. Test Plan approval is based on the system description, design, and operational procedures outlined in AERAS' Test Plan (submitted April 25, 2023). No changes or modifications are permitted to AERAS' emissions control system, including the capture system design and operation, without prior CARB approval. In addition, based on CARB staff's review, AERAS' May 1, 2023 request for 6 additional vessel visits is hereby approved.

In order to obtain CARB Executive Officer approval of AERAS's emissions control strategy application, AERAS will need to complete all testing outlined in their Test Plan submitted April 25, 2023, and provide all reports generated from these tests along with an application for an Executive Order. The application requirements that AERAS must meet to submit test results are outlined in section 93130.5 of the 2020 At Berth Regulation.

Vessel visits that coincide with testing identified in the approved Test Plan may count as a compliant visit under either the a) 2017 Advisory Scenario 5 for visits on or before December 31, 2022, or b) Advisory Scenario 5 or the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation for visits during the transition period on or after January 1, 2023, pursuant to the Enforcement Notice issued by CARB on March 31, 2023.¹ Any such visits after the end of the transition period (thirty (30) days after the date the U.S. EPA publishes its issuance of authorization for the 2020 Regulation in the Federal Register) may count as compliant only under research exceptions of the Regulation. Advisory Scenario 5 and the research exceptions only apply for testing identified in the approved Test Plan (submitted April 25, 2023) and conducted after August 4, 2022, when the now superseded Test Plan (submitted July 14, 2022) was approved. All testing must adhere to the system description, design, and operational procedures outlined in the approved Test Plan (submitted April 25, 2023). To complete all the testing outlined in the Test Plan, a maximum

¹ [At Berth Enforcement Notice - March 30 2023.pdf \(ca.gov\)](#).

of 26 vessel visits can utilize the 2017 Advisory Scenario 5 or the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation.

AERAS is required to submit to CARB vessel visit reporting information for the six additional vessel visits with their Test Report/Executive Order application. AERAS is required to submit the following:

1. Report the purpose of each additional vessel visit, indicating what test was being conducted from the approved Test Plan.
2. Report how much of each visit was controlled.
3. Report if the Regulation requirements for CAECS operators were met for each visit, as specified in Section 93130.12(b)(2) of the Regulation. I.E., did the barge begin controlling emissions within two hours of the vessel being "Ready to Work" and continued controlling emissions until at least one hour before "Pilot on Board." If the Regulation requirements were not met for each vessel visit, AERAS must provide a follow-up report outlining why the operational requirements were not met and how it was resolved.

If you have any questions, please contact Angela Csondes, Manager, Marine Strategies Section, at angela.csondes@arb.ca.gov.

Sincerely,



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

Attachment - Demonstration Plan_RATA+PM_Apr2023.PDF

cc: Angela Csondes, Section Manager, Marine Strategies Section