

April 10, 2023

Michael Walker, CEO
STAX Engineering, Inc.
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Dear Michael Walker:

The California Air Resources Board (CARB) staff reviewed STAX Engineering's Test Plan for the mobile barge-based STAXbox emissions control system to treat emissions from auto carriers/roll-on roll-off (ro-ro) auxiliary engines for use as a CARB Approved Emissions Control Strategy (CAECS).

On March 31, 2022, STAX submitted a Test Plan to obtain approval for the barge-based STAXbox to be used as a CAECS for compliance with the 2020 Control Measure for Ocean-Going Vessels At Berth (2020 At Berth Regulation). CARB staff reviewed the Test Plan and submitted comments to STAX on May 13, 2022, September 7, 2022, November 8, 2022, November 21, 2022, and February 21, 2023. To address staff's comments, STAX revised the Test Plan on July 29, 2022, September 28, 2022, November 8, 2022, December 21, 2022, and again on February 28, 2023.

Based on CARB staff's review, and pursuant to section 93130.5(f) of the 2020 At Berth Regulation, STAX's Test Plan (dated February 28, 2023, attached) is hereby approved in accordance with testing requirements under 2020 At Berth Regulation and CARB's Recommended Emissions Testing Guidelines for Ocean-Going Vessels.¹ In order to obtain CARB Executive Officer approval of STAX's emissions control strategy application, STAX will need to complete all testing outlined in their Test Plan submitted on February 28, 2023, and provide all reports generated from these tests along with an application for an Executive Order. The STAXBox system is designed to control emissions from both container and ro-ro vessels. Since auxiliary engines on container and ro-ro vessels have similar operating profiles, STAX requests that test data obtained from container vessel testing be applied to the STAXBox system for ro-ro vessels. In addition, STAX's Test Plan for ro-ro vessels states that the STAXBox system is planned to have completed testing and obtained CAECS approval for controlling container vessel emissions and proposes additional testing on ro-ro's to expand the STAXBox's approval. Thus, the use of STAX's STAXBox system on ro-ro vessels is based on the successful completion of emissions testing and CARB's issuance of an Executive Order approval of the STAXBox system as a CAECS for controlling emissions from container vessels. Extension of a system approval from one vessel type to another is permissible under the regulatory requirements, and approval extensions occur in other CARB

¹ See in particular 17 CCR 93130.5(f)(4).

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approval and verification processes and programs. Therefore, Executive Order approval and approved operating conditions for ro-ro vessels will only be issued after successful issuance and the approved operating conditions of an Executive Order for container vessels. The application requirements that STAX must meet to submit test results are set forth in section 93130.5 of CARB's 2020 At Berth Regulation. Test Plan approval is based on the system description, design, and operational procedures outlined in STAX's Test Plan (dated February 28, 2023). No changes or modifications are permitted to STAX's emissions control system, including the capture system design and operation, without prior CARB approval.

Vessel visits that coincide with these tests may count as a compliant visit under the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation. However, these sections only apply for testing identified in the Test Plan and conducted after April 10, 2023, when the Test Plan was approved. To complete all of the testing outlined in the Test Plan, a maximum of six vessel visits can utilize the research exceptions in section 93130.8 (d) or 93130.10 (e) of the Regulation. If more than six vessel visits are needed to complete all the testing outlined in the approved Test Plan, STAX can seek additional approval from CARB.

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

Sincerely,



Heather Arias, Chief, Transportation and Toxics Division

Enclosure: STAX CARB Test Plan.RoRo.006 with appendicies.pdf

cc: Angela Csondes, Section Manager, Marine Strategies Section