November 9, 2026

Michael Walker, CEO
STAX Engineering, Inc.
215 West Figueroa Street
Santa Barbara, California 90802
m.walker@staxengineering.com

Dear Michael Walker:

California Air Resources Board (CARB) has reviewed STAX Engineering's (STAX) test plan and design change request for the Xcraft-1 system (STAXbox 1-1 and STAXbox 1-2), and all verified duplicate systems to treat emissions from auxiliary engines on container and auto carriers/roll-on roll-off (ro-ro) vessels.

The Xcraft-1 system and its verified duplicates are currently approved under Executive Order (EO) G-23-294-005 and G-24-054-005 for container and ro-ro vessels as a CARB Approved Emissions Control Strategy (CAECS) for compliance with the Control Measure for Ocean-Going Vessels At Berth (Cal. Code Regs., tit. 17, § 93130 et seq.) (2020 At Berth Regulation). Under this EO, STAX is authorized to operate in the following three modes: one STAXbox controlling one auxiliary engine, two STAXboxes operating simultaneously in dual train mode, each controlling one auxiliary engine, or one STAXbox using a "Y" manifold to control two auxiliary engines while the other STAXbox is not in operation. All duplicate systems verified by CARB may operate under these same approved configurations.

On September 16, 2026, STAX submitted a test plan and a design change request to modify the EO. The change would allow a collection system that routes emissions from one auxiliary engine into two STAXbox trains using a single hood connector.

Approval and Conditions

CARB approves the test plan submitted on September 16, 2026 (Approved Test Plan), under the requirements of the 2020 At Berth Regulation and CARB's Recommended Emissions Testing Guidelines for Ocean-Going Vessels.

This approval is based on the system description, design, and procedures described in the Approved Test Plan. No changes to the Xcraft-1 system (STAXbox 1-1 and STAXbox 1-2), or any verified duplicate system, are allowed without prior CARB approval.

To receive EO approval for the hood connector configuration, STAX must:

- Complete all testing outlined in the Approved Test Plan.
- Submit all test reports to CARB.

Any deviation from the Approved Test Plan without prior CARB approval may result in the application for the proposed amendment to a CAECS being deemed incomplete or disapproved by CARB's Executive Officer. Examples of deviations include:

- Testing on vessel visits not included in the Approved Test Plan.
- Operating any system outside the approved system configuration.

CARB may request results from any additional testing beyond what is described in the plan. Testing may be conducted on the Xcraft-1 base system or any verified duplicate system.

Use of Research Exceptions

Up to **10** vessel visits conducted under the approved test plan may qualify for the research exception under California Code of Regulations sections 93130.8(d) or 93130.10(e). These exceptions only apply to testing described in the approved plan, conducted after its approval, and in accordance with the Approved Test Plan.

STAX is responsible for:

- Tracking the use of the 10 approved research exception visits.
- Providing the Approved Test Plan to each participating vessel.
- Coordinating with vessel operators to ensure they understand the testing and which visit number they represent.

If more visits are needed, STAX must request additional approval from CARB.

Reporting Requirements

All research exception visits must be reported by the terminal operator, vessel operator, and STAX. Specifically:

- **Within 7 days of vessel departure**, STAX must email *shorepower@arb.ca.gov* with:
    - Vessel type, name, and IMO number;
    - Test plan name and CARB approval date;
    - Tests performed and on what emission source configuration and with what Xcraft; and,
    - Number of research exceptions used and remaining.
- **Before vessel arrival**, terminal operators must confirm and record the visit's research exception status with CARB and follow all requirements in section 93130.10(e).

- **Within 30 days of vessel departure**, vessel operators must report the visit in their vessel visit report per section 93130.8(d).

Failure by STAX to report within 7 days of vessel departure may result in the application being deemed incomplete or disapproved by the Executive Officer.

If you have any questions, please contact *shorepower@arb.ca.gov*.

Sincerely,



Tracy Haynes, Chief, Freight Activity Branch, Transportation and Toxics Division

Attachment: STAX Container One_to_Two Test Plan (9_8_26) .PDF