

December 19, 2022

Mr. Nick Tonsich
Clean Air Engineering-Maritime, Inc.
2500 Via Cabrillo Marina, Suite 300
San Pedro, California 90731
ntonsich@caemaritime.com

Dear Mr. Tonsich:

California Air Resources Board (CARB) staff has reviewed Clean Air Engineering-Maritime, Inc.'s (CAEM) Test Report, dated March 31, 2022, and supplemental information submitted on May 6, 2022, June 6, 2022, July 1, 2022, and August 2, 2022, for the ShoreKat. The purpose of the Test Report was to provide emission measurements and associated information to support the development of control factors for the ShoreKat for use by bulk vessels in accordance with CARB's Airborne Toxic Control Measure (ATCM) for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port Regulation (2007 At-Berth Regulation or ATCM). CARB staff's review of the CAEM Test Report was based on the requirements in the 2007 At-Berth Regulation, the guidelines provided in CARB's "Recommended Emissions Testing Guidelines for Ocean-going Vessels," and the approved CAEM Test Protocol (or Test Plan) dated January 12, 2018 and approved on June 26, 2018.

We are pleased to inform you that we have approved the results of the emission measurements and are issuing the attached Executive Order G-22-479. Executive Order G-22-479 identifies the approved control efficiencies, as well as monitoring, reporting, and recordkeeping requirements for the ShoreKat. Executive Order G-22-479 also stipulates the approved operating conditions for the use of the ShoreKat which are identified in the table below.

ShoreKat Approved Operating Conditions

Parameter	Value
Ocean-going Vessel type	Bulk vessel
Ocean-going Vessel Engine type	One auxiliary engine
Fuel composition limitations	Marine distillate fuel with $\leq 0.1\%$ sulfur content
Engine exhaust temperature requirements	350-700°F
Other parameters that affect performance	Filter face velocity less than 0.03 m/s

Parameter	Value
Static Pressure	Differential pressure between -2 to -20 inches of water across the filter.
Allowable operating range (kW)	<400 kW; only one auxiliary engine may be controlled per ShoreKat system
Exhaust flow rate that can be treated (standard cubic feet per minute (scfm))	2,500 to 3,500 scfm of engine exhaust
Maintenance Requirements	Per Section 5: Maintenance in CAEM's Test Protocol

The ShoreKat has been granted an Executive Order under the ATCM, California Code of Regulations, title 17, section 93118(e)(4) and may operate under those terms until 2025 as an approved CARB Approved Emission Control Strategy (CAECS) before needing to apply for an extension, as specified in Section 93130.5(d)(3) of the "Control Measure for Ocean-Going Vessels At Berth" (the "CM;" title 17, California Code of Regulations, section 93130) (2020 At Berth Regulation), which supersedes the ATCM and establishes requirements for ocean-going vessels that reduce oxides of nitrogen (NOx) and diesel particulate matter (PM) emissions.

Additional vessel source testing and an extension application would be necessary to extend the range of approved operating conditions or the inclusion of additional vessel types, and an extension would also need to demonstrate that the system complies with the requirements of the 2020 At Berth Regulation as a CAECS, including meeting Reactive Organic Gas (ROG) and Grid Neutral requirements as specified in Section 93130.5(d) of the 2020 At Berth Regulation.

In closing, we appreciate the opportunity to work with CAEM in its efforts to implement a shore-based control system to treat bulk vessel auxiliary engine emissions while at berth. If you have any questions, please contact Angela Csondes, Manager, Marine Strategies Section at angela.csondes@arb.ca.gov. In addition, please feel free to contact Nick Storelli, Air Resources Engineer, Marine Strategies Section at nicholas.storelli@arb.ca.gov.

Sincerely,



Heather Arias, Chief, Transportation and Toxics Division

Enclosure: Executive Order G-22-479

cc: Angela Csondes, Section Manager, Marine Strategies Section