

August 31, 2023

Andrew Liu, Executive President
4G Management Inc
222 West 6th St
San Pedro, California 90741
andrew@4gmanagement.com

Dear Andrew Liu:

The California Air Resources Board (CARB) staff reviewed 4G Management's Maritime Emissions Capture & Control System (MECCS) Test Plan for the barge-based emission control strategy to treat emissions from container ship auxiliary engines.

On January 23, 2023, 4G Management submitted a Test Plan to gain approval for the barge-based MECCS 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 4G Management on February 17, 2023, April 5, 2023, May 23, 2023, June 23, 2023, July 18, 2023, and July 21, 2023. To address CARB staff's comments, 4G Management revised the Test Plan on March 20, 2023, April 20, 2023, May 27, 2023, July 7, 2023, July 19, 2023 and again on July 24, 2023.

Based on CARB staff's review, and pursuant to section 93130.5(f) of the 2020 At Berth Regulation, 4G Management's Test Plan is hereby approved in accordance with testing requirements under CARB's 2020 At Berth Regulation and CARB's Recommended Emissions Testing Guidelines for Ocean-Going Vessels.

Test Plan approval is based on the system description, design, and operational procedures outlined in 4G Management's Test Plan (submitted July 24, 2023). No changes or modifications are permitted to 4G Management's MECCS emissions control system, including the capture system design and operation, without prior CARB approval. In order to obtain CARB's Executive Officer's approval of 4G Management's emissions control strategy application, 4G Management will need to complete all testing outlined in their Test Plan submitted on July 24, 2023, and submit all reports generated from these tests along with an application for an Executive Order.

The application requirements that 4G Management 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 Test Plan without prior CARB approval, the Executive Officer may deem the application incomplete or disapprove the application. An example of deviating from the Test Plan includes utilizing vessel visits beyond those approved in the Test Plan for the purposes of compliance with the At Berth Regulation. CARB reserves the right to request the results of any testing conducted in addition to the approved Test Plan in support of this approval.

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 United States Environmental Protection Agency (U.S. EPA) publishes its issuance of authorization for the 2020 At Berth 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 July 24, 2023) and conducted after August 31, 2023, when the Test Plan was approved.

All testing must adhere to the system description, design, and operational procedures outlined in the approved Test Plan (submitted July 24, 2023). To complete all the testing outlined in the Test Plan, a maximum of six 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.

4G Management is responsible for tracking the usage of the six approved vessel visits and providing a copy of the approved Test Plan to each vessel participating in the research. 4G Management is also responsible for communicating with the vessel operator to ensure the operator knows what tests from the approved Test Plan are being performed. Since 4G Management is only approved to conduct testing on six vessel visits, 4G Management must inform each participating vessel operator which number out of the six approved visits they are a participant in. Any tests completed in addition to those approved in the Test Plan and performed for the purposes of compliance with the regulation would be considered non-compliant with Section 93130.5(a). If more than six vessel visits are needed to complete all the testing outlined in the approved Test Plan, 4G Management must seek additional approval from CARB to amend the approved Test Plan.

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

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Bonnie Soriano". The signature is fluid and cursive, with the first name "Bonnie" written in a larger, more prominent script than the last name "Soriano".

Bonnie Soriano, Branch Chief, Freight Activity Branch, Transportation and Toxics Division
Attachment - MECCS-1 Test Plan 7.24.23 Finalized.PDF

cc: Angela Csondes, Section Manager, Marine Strategies Section