

May 16, 2024

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

Dear Andrew Liu:

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

On January 23, 2023, 4G Management submitted a Test Plan to gain approval for the barge-based MECCS to be used as a CARB Approved Emissions Control Strategy (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 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.

On August 31, 2023, CARB approved 4G Management's Test Plan (submitted July 24, 2023) and issued a Test Plan approval letter. On April 4, 2024, 4G Management sent CARB an amended Test Plan and requested staff's review and approval. The amended Test Plan included recalculating the grid neutral calculation, updating the number of Relative Accuracy Test Audit (RATA) tests, and changing the company performing the third-party party source testing.

CARB staff reviewed the Test Plan (submitted April 4, 2024) and provided comments to 4G Management on April 12, 2024. To address staff's comments, 4G Management revised and resubmitted the Test Plan on April 15, 2024.

Based on CARB staff's review and pursuant to Health and Safety Code section 93130.5(f) of the 2020 At Berth Regulation, 4G Management's Test Plan (dated April 15, 2024) 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Plan approval letter (dated August 31, 2023) and 4G Management's Test Plan (submitted July 24, 2023) are now considered superseded.

CARB approval is based on the system description, design, and operational procedures outlined in 4G Management's Test Plan (dated April 15, 2024). No changes or modifications

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are permitted to the MECCS system, including the capture system design and operation, without prior CARB approval.

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 conducting testing on additional vessel visits beyond those approved in the Test Plan and claiming such visits qualify for the research exception set forth in section 93130.8(d) or 93130.10(e) of the 2020 At Berth Regulation. CARB reserves the right to request the results of any testing conducted beyond the testing described in the approved Test Plan.

Vessel visits that coincide with the tests specified in the approved test plan may count as a compliant visit under the research exceptions in section 93130.8(d) or 93130.10(e) of the 2020 At Berth Regulation; however, these sections only apply for testing identified in Test Plan (dated April 15, 2024) and conducted after the date of this letter when Test Plan (dated April 15, 2024) was approved. All testing must adhere to the system description, design, and operational procedures outlined in the approved Test Plan. To complete the testing outlined in the Test Plan (dated April 15, 2024), a total of six vessel visits are approved to utilize the research exception to compliance with the 2020 At Berth Regulation set forth in section 93130.8(d) or 93130.10(e).

4G Management is responsible for tracking the usage of the six approved vessel visits that may utilize the research exception, and 4G Management must provide 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 are being performed during the visit, and which number out of the six approved visits the vessel is participating in. As noted above, any tests completed in excess of those approved in the Test Plan would not be eligible for the research exception to compliance with the 2020 At Berth Regulation set forth in section 93130.8(d) or 93130.10(e). 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.

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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, Chief, Freight Activity Branch, Transportation and Toxics Division

Attachment: MECCS-1 Test Plan 4.15.24 Finalized.pdf

cc: Angela Csondes, Section Manager, Marine Strategies Section