

State of California
Air Resources Board

Executive Order G-22-317

Relating to Temporary Experimental or Research Exemption under California Code of Regulations, title 13, section 2299.2(c)(6) and title 17, section 93118.2(c)(6)

Maersk Line

WHEREAS, pursuant to sections 39600, 39601, 41510, 41511, 43013, and 43018 of the Health and Safety Code, the California Air Resources Board (CARB) has established requirements for ocean-going vessels (OGV) to use marine gas oil (DMX, DMA, or DMZ grade) or marine diesel oil (DMB grade) at specified sulfur limits ("compliant fuels") in the main engine, auxiliary engines, and auxiliary boilers within a 24 nautical mile zone of the California Coastline; these requirements are found at California Code of Regulations (CCR), title 13, section 2299.2 and title 17, section 93118.2 (OGV Fuel Regulation);

WHEREAS, subdivision (c)(6) of the OGV Fuel Regulation, authorizes the Executive Officer to provide a temporary exemption in whole or part from using the specified fuels for the purpose of research or experimentation that will generate data that advances the state of knowledge of exhaust control technology or characterization of emissions;

WHEREAS, for each visit where experimental testing was conducted, a fleet must provide the name of the alternative control technology, the name of the vessels using the control technology, the type of test specified in the approved test plan, the date and time the testing was conducted, and the total hours of operation by the control technology during the visit;

WHEREAS, on July 6, 2022, Maersk Line submitted a request that identifies the need for an exemption from the OGV Fuel Regulation to allow this testing;

WHEREAS, Maersk has agreed to make the cargo container vessel "Gerner Maersk," (IMO # 9359002) available to the University of California, Riverside (UCR) for emissions testing on the vessel's main engine, as described in the test plan entitled "Work Plan: Gerner Maersk Sea Trials - Demonstrate & Test Monitoring Technologies to enhance compliance with the North American ECA & the California OGV Fuel Regulation;"

WHEREAS, Maersk has agreed to allow this research to be conducted on the Gerner Maersk vessel which will study the feasibility of utilizing UAV's (Uncrewed Aerial Vehicle) with sensor packages, and at the same time study the use of a small plane (equipped with an infrared (IR) hyperspectral imaging camera) in determining compliance with emission control area (ECA) and CARB OGV Fuel Regulations;

WHEREAS, in this research study, the Gerner Maersk test vessel will leave the Port of Los Angeles operating its main engine on CARB compliant marine gas oil or marine diesel oil (MGO/MDO, 0.1 percent Sulfur distillate). Once the vessel receive clearance from the port the vessel will conduct a single fuel changeover to CARB/ECA non-compliant commercially available very low sulfur fuel oil (VLSFO) (0.5 percent Sulfur Residual Grade Fuel), operate for

no more than two hours, and then switch back to compliant MGO during transit to the Port of Hueneme;

WHEREAS, the purpose of this project is to assess the viability of different remote monitoring technologies to determine compliance with OGV Fuel Regulation at berth, at anchor, and at sea;

WHEREAS, testing will commence on the Gerner Maersk over a ~14-hour voyage from the Port of Los Angeles to the Port of Hueneme between the timeframe of August 8, 2022, and September 8, 2022;

WHEREAS, Maersk through UCR has requested a Temporary Experimental or Research Exemption for one main engine on the vessel listed in Table 1;

Table 1. Vessel and Engine Information

Owner/ Operator	Vessel Name	IMO	Main Engine Make/Model	Number of Main Engines
Maersk Line	Gerner Maersk	9359002	Doosan-Wärtsila 12-RT Flex96C	1

WHEREAS, UCR, proposes to test the emissions according to International Organization for Standardization and International Maritime Organization protocols;

WHEREAS, CARB staff has reviewed Maersk’s request and the associated test plan developed by CARB and UCR and determined the company has provided a clear and convincing demonstration that its research project with UCR will meet the requirements for a Temporary Experimental or Research Exemption because it involves a formal research project that will generate data that advances the state of knowledge for OGV baseline emissions and alternative fuels; and

WHEREAS, based on the determination described above, the vessel and engine listed in Table 1 qualify for the Temporary Experimental or Research Exemption for the OGV Fuel Regulation.

NOW, THEREFORE, IT IS ORDERED, Maersk is granted an exemption after the effective date of this Executive Order, from August 8, 2022, until September 8, 2022, from the fuel use specifications set forth in subdivision (e)(1) of the OGV Fuel Regulation for the vessel and engine listed in Table 1, only to the extent that the use of noncompliant fuel is necessary to measure exhaust emissions, as determined by UCR and approved by CARB staff.

BE IT FURTHER ORDERED, Maersk shall keep the following records documenting the use of noncompliant fuel within Regulated California Waters for at least three years following the date when the records were made:

- The specific main engine using the noncompliant fuel due to emissions testing;
- The type of testing or evaluation being conducted;
- The type of noncompliant fuel used, and its sulfur level (percent by weight);
- The time period when noncompliant fuel is used (date and local time); and

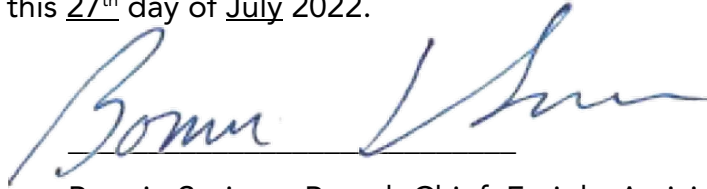
- The locations (longitude and latitude) when noncompliant fuel is used.

BE IT FURTHER ORDERED, UCR shall provide CARB with a final report, all official test data, vessel visit information, and all other project results by December 31, 2022. This information must describe the emissions testing and other data generated by the project, any operational issues encountered, and any other information relevant to the emissions testing project.

BE IT FURTHER ORDERED, during the exemption period covered by this Executive Order, Maersk shall take all feasible measures to minimize the emissions from the engine listed in Table 1, including but not limited to avoiding the unnecessary operation of the engine on noncompliant fuel.

BE IT FURTHER ORDERED, if the Executive Officer determines that the Temporary Experimental or Research Exemption is no longer warranted, the Executive Officer may modify or revoke this exemption after providing written notice to Maersk Line of its intent to modify or revoke the exemption.

Executed at Sacramento, California this 27th day of July 2022.

A handwritten signature in blue ink, appearing to read "Bonnie Soriano", is written over a horizontal line.

Bonnie Soriano, Branch Chief, Freight Activity Branch