

Republic of the Marshall Islands

MARITIME ADMINISTRATOR

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MARINE SAFETY ADVISORY No. 06-19

To: Owners/Operators, Masters, Nautical Inspectors, Recognized Organizations

Subject: GAS CARRIERS OPERATING IN THE UNITED STATES

Date: 21 February 2019 (renewed for 2025)

This MSA highlights that adequate preparation and testing of a liquefied gas carrier's fixed gas detection and deck water-spray systems is essential, prior to entering and during operation in US territorial waters.

The Republic of the Marshall Islands Maritime Administrator (the "Administrator") requirements for these systems are found in Marine Notice [2-011-14](#), *Maintenance and Inspection of Fire Protection Systems and Appliances*. These, along with the best practices identified below, are essential for gas carriers operating anywhere in the world. Owners and operators are encouraged to include fleet-wide operation training on them.

The Administrator is aware that US Coast Guard (USCG) Port State Control (PSC) Officers have found:

- gas detection systems out of calibration;
- ship's officers unable to properly calibrate the equipment onboard;
- improper span gases used for testing; and
- deck water-spray systems have failed to provide adequate coverage.

These avoidable issues have resulted in USCG PSC detentions.

GAS DETECTION SYSTEMS

The US Code of Federal Regulations requirements are:

46 CFR 154.1345	each vessel carrying a liquefied gas cargo designated as flammable, toxic, or both, must be fitted with a gas detection system that will meet all the requirements in 46 CFR 154.1350
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This MSA is evaluated annually by the Administrator and expires one year after its issuance or renewal unless otherwise noted, superseded, or revoked.

The sample locations typically checked by the USCG PSC may include, but are not limited to:

- cargo pump/compressor motor rooms;
- cargo control rooms unless designated as gas safe;
- enclosed areas in the cargo area where gas may accumulate including cargo hold spaces and interbarrier spaces;
- ventilation hoods and gas ducts; and
- airlocks, if installed.

The Administrator underscores the need for:

- officers and crews to be proficient in the use of and familiar with the calibration requirements for both fixed and portable gas detection systems;
- designated qualified individuals to be able to perform calibration procedures found in the manufacturer's instructions;
- all testing and calibration to be carried out at regular intervals in accordance with the vessel's Planned Maintenance System (PMS);
- all vessels to verify that the span gas provided onboard is of the exact specifications, including concentration, required by the manufacturer when conducting such tests; and
- sample points for fixed gas detectors to be verified as provided by the PMS and the approved installation plans. This should include checking the integrity of all sample piping leading back to the central unit.

DECK WATER SPRAYS

The US Code of Federal Regulations requirements are:

46 CFR 154.1105	requires that each liquefied gas vessel must have an exterior water spray system that meets 46 CFR 154.1110 to 154.1135.
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The areas checked by USCG PSC may include, but are not limited to:

- exposed tank domes and deck tanks;
- cargo manifolds and control valves at least equal to the area of their spill drip trays;
- boundaries of superstructure and deckhouses;

- cargo control rooms; and
- store rooms in the cargo area with contents having a fire risk.

The Administrator underscores the need for:

- gas carrier officers to perform routine testing and maintenance of the deck water-spray system according to the PMS and the maker's instructions. This will verify that the system provides adequate, uniform coverage to all areas as designed;
- the system to deliver sufficient water to all areas simultaneously. Where the system is divided into sections, the arrangements and capacity should be able to supply water to one section;
- focusing attention to the water-spray systems' in-line filters, orifice plates, and spray nozzles to ensure they are free from all foreign matter, including salt accumulation, and rust or scale;
- flushing the piping with fresh water after each spray system test with sea water to prevent scale build-up;
- maintaining verifiable documentation of required servicing and maintenance; and
- keeping documented digital photos or video recordings of tests as evidence that they have been carried out.