

Checklist for compliance with the 0.50% mass by mass (m/m) sulphur cap

From 1 January 2020, the limit for sulphur in fuel oil on board ships operating outside designated Emission Control Areas (ECAs) will be reduced from 3.50% to 0.50% mass by mass (m/m). Whilst the below checklist is not exhaustive, it may be used as a guide to complement any intended operational changes that Members are planning in order to comply with the impending MARPOL convention changes.

General

- Have you developed a [ship specific implementation plan^{\[1\]}](#), in accordance with guidance from the IMO?
- In the event that any structural modifications are required, have these been added to the ship specific implementation plan and approved by the flag state and/or classification society as applicable?
- Has a risk assessment for compliance been carried out and available on board?
- Has crew and shore side personnel training been carried out with appropriate records available?
- If the vessel is greater than 400GT, is the International Air Pollution Prevention (IAPP) Certificate or related exemption documentation available on board?
- Are the Oil Record Book and any other required records^[2] available and up to date?
- Do records note the condition of tanks, pipelines and other associated bunkering equipment?
- Do the Bunker Delivery Notes clearly verify whether the fuel oil sulphur content is above 0.50% m/m?
- Have you taken precautions to avoid comingling of supplied bunkers^[3] with fuel already on board the vessel?
- If comingling of fuel is unavoidable, have you ensured that clear fuel test documentation is available for each batch of fuel?
- Have you made preparations for entry into Emission Control Areas (ECAs) in sufficient time to allow for complete flushing of the fuel system or effective operation of the scrubber system?
- If so, are written changeover procedures available to crew and the necessary associated records available and maintained on board the vessel?

Where a scrubber system is installed

- Is the scrubber system type approved, in good working order with planned maintenance

tasks up to date and monitoring devices fully operational?

- Are operational and maintenance records for the scrubber system and its associated equipment being maintained on board and are these available for inspection?
- Do any ports restrict or have additional requirements for the discharge of open loop scrubber system wash water on the upcoming voyage(s)?
- If so, have you made arrangements for specialist disposal arrangements if necessary?

Where switching to a new fuel type, for example from heavy fuel oil to a low sulphur fuel

- Have you completed a suitability assessment, including reference to manufacturer's instructions, to establish what impacts a change in fuel type may have on existing machinery and equipment?
- Have the tanks and pipelines been thoroughly flushed and cleaned to avoid cross contamination?
- Do records note that segregation of fuel system tanks and pipe work has been maintained where necessary?
- Have you conducted additional tests^[4] for bunkers before utilising them?
- If additional tests are not practicable, are you monitoring the vessel's filters and fuel consumption^[5] when commencing use of fresh bunkers in order to identify any problem at the earliest opportunity?

In the event that the vessel is not able to comply with sulphur cap requirements, the vessel's shore management should be notified immediately, and the details of any non-compliance recorded in the vessel's log books^[6].

Further useful information can be found in the following Club and industry publications

- [Infographic: The 2020 global sulphur limit](#)
- [Methods of compliance with the 2020 sulphur limit](#)
- [IG Circular: The 2020 global sulphur cap](#)
- [International Chamber of Shipping: Compliance with the 2020 'Global Sulphur Cap'](#)
- [International Maritime Organization: Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI](#)
- [2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit Under MARPOL Annex VI](#)
- [Joint Industry Guidance on the supply and use of 0.50% - sulphur marine fuel](#)

[1] Whilst the implementation plan is not mandatory and is not subject to endorsement by the flag state or a recognised organization (RO), Administrations and Port State Control authorities may take the implementation plan into account when verifying compliance.

[2] Including but not limited to, Bunker Delivery Notes and MARPOL Fuel Sample Records, Scrubber System Record Book and

Sulphur Oxides Fuel Changeover Record Book.

[3] This is recommended for all bunkers, even of similar types, but especially of differing types.

[4] Testing for compliance with ISO 8217 and additional compatibility testing, ordinarily conducted by specialist fuel oil testing laboratories.

[5] If incompatible fuels are comingled within a tank there will be a tendency for instability and subsequent separation of the product into dissimilar phases, a heavy sludge and lighter fractions. These separate phases are respectively un-pumpable and of the incorrect viscosity for use within the engine, and as such will cause operational failure and potential damage. This can be monitored and observed at the tanks themselves, during daily water removal, and/or within the system during operations through purifiers failing and filters blocking etc.

[6] The IMO has a template for Fuel Oil Non-Availability Reporting (FONAR) available in the 2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit Under MARPOL Annex VI.