

PSC Related Circular

No.PSC **8/2020**

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Subject:
PSC spot sampling of ships' fuel

The frequency of port state control taking **spot samples** of a ship's fuel oil to verify its sulphur content is expected to **increase significantly** in 2020. Proper onboard procedures and a well prepared and attentive crew can be crucial in avoiding unwarranted penalties.

Onboard spot sampling of ships' fuel is nothing new. Since the 0.10% sulphur cap entered into force in EU ports and the designated ECAs, **spot sampling and analysis of ships' fuel have been common as a means for port state control (PSC) to verify the actual sulphur content of the fuel in use.**

The IMO's adoption of a prohibition on the carriage of non-compliant fuel oil from 1 March 2020, the so called 'carriage ban', is also expected to drive the requirements for further sampling by PSC.

A ship may be targeted for a sulphur inspection for various reasons, e.g. the existence of a previous non-compliance or warning received concerning its fuel, the ship is scheduled to bunker at a specific port, or as part of a maritime safety administration's enhanced verification programme - or just randomly in order to reach an overall percentage inspection rate set by the PSC.

METHODS OF VERIFYING COMPLIANCE

For the vast majority of ships that plan to meet the 2020 requirement by burning low sulphur fuel, PSC has essentially two methods of establishing whether a ship is compliant:

- 1) Verify the sulphur content of the ship's fuel, e.g. by reviewing procedures, bunker delivery notes (BDN), log book recordings, analyse the MARPOL delivered sample, and taking additional samples at different locations of the fuel oil system.
- 2) Measure the sulphur content in the ship's exhaust gas, e.g. by use of remote sensing equipment such as sulphur-sniffing drones or similar monitoring equipment placed at strategic locations on shore.

DOCUMENT REVIEW

Much of the compliance with MARPOL Annex VI is documented by recordkeeping. It will therefore be important to ensure that that all MARPOL Annex VI documentation is complete and up-to-date prior to a port entry. Results from Tokyo MOUs concentrated inspection campaign in 2018 show that [missing BDNs](#) was one of the most notable deficiencies found during the campaign. Regulation 18.6 of MARPOL Annex VI requires BDNs to be retained onboard for a period of three years after the fuel has been delivered onboard.

In the shorter term, PSC may also consider ship implementations plans (SIP) when verifying compliance with the 0.50% sulphur limit requirement. A ship with a suitably developed SIP, and a clear record of the actions taken in order to be compliant, should be in a better position to demonstrate to PSC that the ship's crew and managers have acted in good faith and done everything that could be reasonably expected to achieve full compliance. A SIP is, however, not mandatory and therefore, the absence of such or incorrect entries etc. should not form the basis for a PSC deficiency.

INITIAL CHECK

The use of remote sensing equipment and portable handheld fuel analysers is likely to become increasingly common during initial inspections by PSC. As an example, the Danish Maritime Authorities recently announced that a sulphur-sniffing drone is already in use to check emissions from ships in Danish waters.

The ship's crew should, however, be aware that the results from such equipment may be of an indicative nature only and should not necessarily be accepted as the sole evidence of non-compliance. PSC inspectors are, however, likely to consider such results to be 'clear grounds' for further inspection.

MORE DETAILED INSPECTION

Given 'clear grounds' to conduct a more detailed inspection, PSC may require samples of fuel oils to be analysed at a fuel testing laboratory. This could be either the representative samples provided with the BDN, or spot samples of fuel oil drawn from a ship's fuel oil lines and/or tanks.

Where the MARPOL delivered sample required under Regulation 18.8.1 is taken from the ship, a receipt should be provided to the ship. Where spot samples are drawn from the ship's fuel oil lines or tanks during the inspection, the Chief Engineer should be present at all times to verify that samples are drawn at the right location and in the correct way. The Chief Engineer should also inspect the immediate quality of the sample, verify that each sampling bottle is properly labelled and make sure the ship's own samples are retained onboard. It is important that the PSC inspector reports information such as the sampling point location where the sample was drawn, date and port of sampling, name and IMO number of the ship, and details of seal identification.

Designated sampling points become mandatory under MARPOL Annex VI [MEPC.1/Circ.864/Rev.1 2019 – Guidelines for on-board sampling for the verification of the sulphur content of the fuel oil used on board ships](#)

Amendment imposing a new retroactive requirement for designating, or if necessary fitting, sampling points to facilitate taking the in-use sample was approved (MARPOL Annex VI, Reg.14).

Ships will be required to designate sampling points no later than the **first IAPP renewal survey** that occurs 12 months or more after the entry into force of the regulation, expected to be in 2021. The 2019 guidelines for on-board sampling describes how and where the designated sampling points are to be fitted.

MEPC.1/Circ.881 – Guidance for port state control on contingency measures for addressing non-compliant fuel oil

This guidance is meant to address how to deal with all possible instances of non-compliant fuel oil, not only limited to FONAR cases. The following contingency measures are to be considered between ship and port state:

- Actions predetermined in the SIP (if available)
- Discharging non-compliant fuel oil to another ship to be carried as cargo or to an appropriate ship-board or land-based facility, if practicable and available
- Managing the non-compliant fuel oil in accordance with a method acceptable to the port state
- Operational actions, such as modifying sailing or bunkering schedules and/or retention of non-compliant fuel oil, on board the ship. The port state and the ship should consider any safety issues and avoid possible undue delays.

After the non-compliant fuel oil is completely used or discharged, such actions should include the possibility of cleaning and/or flushing through or dilution of remaining residues by using compliant fuel oil with the lowest sulphur content available.

The European Maritime Safety Agency's (EMSA) "[Sulphur Inspection Guidance](#)" provides useful advice and information on the PSC's approach to the inspection of ships and how they ascertain a vessel's compliance with applicable sulphur in fuel requirements. Section 2.7 of the EMSA guidance addresses sample collection and analysis