PACIFIC MARINE SERVICES

Date :05-02-2020

No.012/P.M.S/T.P/20

Technical Publications

Pages - (10)

The IMO 2020 Sulphur Limit

(Explanatory guidance)

Notice to :
Ship Owners / Manager / operators / Surveyors

Dear Sirs,

P.M.S Class is releasing today, technical publication concerning the IMO 2020 Sulphur Limit. The publication intends to bring forward the requirements for compliance with the IMO 2020 Challenge of the Sulphur Limit, as well as the requirements for specific matters such as :

- **The Ship Implementation Plan;**
- **The Ship Oil Fuel Non-availability Report (FONAR);**
- **The Tank cleaning;**
- **The Port State Control inspection; and**
- **Local restrictions for exhaust gas cleaning systems.**

REVISION HISTORY

Rev. No	Date	Amendments
Initial	February 2020	Initial issue

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

CONTENT

BACKGROUND	
THE GOAL OF IMPROVED ENERGY EFFICIENCY	
IMO COMES IN FRONT	
THE 2020 CHALLENGE	
COMPLIANCE	
EXHAUST GAS CLEANING SYSTEMS (EGCS)	
BUNKER DELIVERY NOTES	
ADDITIONAL REQUIREMENTS FROM VARIOUS MEMBER STATES	
SHIP IMPLEMENTATION PLAN	
FUEL OIL NON-AVAILABILITY REPORT (FONAR)	
INVESTIGATING NON-AVAILABILITY	
POSSIBLE SAFETY IMPLICATIONS RELATING TO FUEL OILS MEETING THE 0.50% M/M SULPHUR LIMIT	
TANK CLEANING	
OPTIONS FOR TANK CLEANING, APPROXIMATE TIMELINES AND CONSIDERATIONS	
1. MANUAL CLEANING DURING DRY DOCKING	
2. MANUAL CLEANING DURING SERVICE	
3. CLEANING TANKS IN SERVICE WITH SPECIALIZED ADDITIVES	
PORT STATE CONTROL INSPECTIONS	
INSPECTIONS BASED ON DOCUMENTS AND OTHER POSSIBLE TARGETING MEASUREMENTS	
FUEL OIL SAMPLE ANALYSIS	
NON-COMPLIANT FUEL OIL	
ANNEX 1 – FUEL OIL NON-AVAILABILITY REPORT (FONAR	
ANNEX 2 – PORT STATE CONTROL CHECKLIST	
ANNEX 3 - LOCAL RESTRICTIONS FOR EXHAUST GAS CLEANING SYSTEM	

BACKGROUND

One of the major global environmental concerns today is the air pollution from maritime transportation. One of the main elements of pollution are the sulphur emissions (SOx), which exist due to the presence and burning of sulphur compound in the fuel on board ships.

The shipping industry is among the world's biggest sulfur emitters, with sulfur oxide content in heavy fuel oil up to 3,500 times higher than the latest European diesel standards for vehicles, and environmental groups.

THE GOAL OF IMPROVED ENERGY EFFICIENCY

The aim of improved energy efficiency for reduced air emissions can notably be achieved through actions in two main directions, at the level of design and at the level of operation of the vessel. New strategies and technologies aiming at reducing ships' fuel consumption are currently a priority for the industry.

Some of the new technologies are the air cavity systems, wind power, fuel additives, twin propellers, new propeller blades, recovery of waste gas heat, and others. The cost related to new technologies can be divided into capital costs (construction, manpower, license fees, delivery of the installation, etc.) and operating costs which relate to annual expenditure.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

IMO COMES IN FRONT

The International Maritime Organization (IMO) has approved and adopted a comprehensive set of guidelines to support the consistent implementation of the lower 0.50% limit on sulphur in ships' fuel oil, which will enter into effect from 01 January 2020. Related draft MARPOL amendments were also approved.

The 2020 rule will bring in considerable benefits for the environment and human health. The stricter limit will be applicable globally under IMO's MARPOL treaty. (In designated emission control areas (ECAs), the sulphur limit will remain at 0.10%.)

The 01 January 2020 implementation date was adopted in 2008 and confirmed in 2016. IMO has been working with Member States and the industry to support implementation of the new limit, including the preparation of amendments to MARPOL Annex VI and development of guidance and guidelines.

Enforcement, compliance with and monitoring of the 2020 sulphur limit is the remit and responsibility of States Party to MARPOL Annex VI. Most ships are expected to utilize new blends of fuel oil which will be produced to meet the 0.50% limit on sulphur in fuel oil or compliant marine gas/diesel oil.

The IMO Marine Environment Protection Committee (MEPC), meeting for its 74th session adopted the 2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI, Resolution MEPC.320(74) - with sections on the impact on fuel and machinery systems resulting from new fuel blends or fuel types; verification issues and control mechanism and actions, including port State control and samples of fuel oil used on board; a standard reporting format for fuel oil non-availability (fuel oil non-availability report (FONAR); and possible safety implications relating to fuel oils meeting the 0.50% sulphur limit.

In addition to the above Guidelines, during the MEPC 74th meeting more guidelines have been adopted, such as :

- 2019 Guidelines for port State control under MARPOL Annex VI Chapter 3, providing updated enforcement guidance for provisions including regulation 13 "nitrogen oxides" and regulation 14 "sulphur oxides and particulate matter" , MEPC.321(74).
- Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the exhaust gas cleaning system (EGCS) fails to meet the provision of the Guidelines, MEPC.1/Circ.883.
- Guidance for port State control on contingency measures for addressing non-compliant fuel oil. The guidance covers possible actions to be taken, following discussions between ship, flag State and port State, when a ship is found to have on board non-compliant fuel oil either as a consequence of compliant fuel oil being not available when the ship bunkered fuel oil or the ship identifying through post bunkering testing that the fuel oil on board is non-compliant, MEPC.1/Circ.881.
- 2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships, MEPC.1/Circ.864/Rev.1.
- MSC-MEPC circular on Delivery of compliant fuel oil by suppliers, MSC-MEPC.5/Circ.15.
- Guidance for best practice for Member State/coastal States, MEPC.1/Circ.884.

The MEPC 73 in October 2018 had already approved Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI (MEPC.1/Circ. 878).

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

THE 2020 CHALLENGE

On and after 01 January 2020, the MARPOL permitted limit for sulphur content in ships' bunker fuel oil will be reduced from 3.50% mass by mass (m/m) to 0.50% m/m for ships operating outside designated emission control areas.

The MARPOL Emission Control Area (ECA) limit of 0.10% will still apply, as will any applicable local regulations.

The IMO's Marine Environment Protection Committee (MEPC 73) has approved a prohibition on the carriage of noncompliant bunker fuel which will come into force on 1 March 2020 (Regulation 14 MARPOL Annex VI), with certain caveats.

Ships fitted with exhaust gas cleaning systems (scrubbers), which are designed to remove sulphur oxides from the ship's engine and boiler exhaust gases in order to reduce sulphur emissions to a level not exceeding the required fuel oil Sulphur limit, can continue to carry fuel with a sulphur content of more than 0.50%..

COMPLIANCE

The IMO MARPOL regulations limit the sulphur content in fuel oil. So, ships need to use fuel oil which is inherently low enough in sulphur, in order to meet IMO requirements.

Refineries may blend fuel oil with a high (non-compliant) sulphur content with fuel oil with a sulphur content lower than the required sulphur content to achieve a compliant fuel oil. Additives may be added to enhance other properties, such as lubricity.

Some ships limit the air pollutants by installing exhaust gas cleaning systems, also known as "scrubbers". This is accepted by flag States as an alternative means to meet the sulphur limit requirement. These scrubbers are designed to remove sulphur oxides from the ship's engine and boiler exhaust gases. So, a ship fitted with a scrubber can use heavy fuel oil, since the sulphur oxides emissions will be reduced to a level equivalent to the required fuel oil sulphur limit.

Ships can have engines which can use different fuels, which may contain low or zero sulphur. For example, liquefied natural gas, or biofuels.

EXHAUST GAS CLEANING SYSTEMS (EGCS)

Regulation 4 of MARPOL Annex VI allows for Administrations (flag States) to approve "equivalents" - any "fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required" - that enables the same standards of emission control to be met.

For reduction of sulphur oxide emissions, some flag States have accepted and approved scrubbers - otherwise known as "Exhaust Gas Cleaning Systems", as meeting the requirements for sulphur oxide reduction.

There is an important requirement in the same regulation on Equivalents, which says that in paragraph 4 "The Administration of a Party that allows the use of an equivalent …. shall endeavour not to impair or damage its environment, human health, property, or resources, or those of other States".

IMO has adopted strict criteria for discharge of washwater from EGCS. Any residues, where generated by the EGC unit usually in a closed-loop configuration, should be delivered ashore to adequate reception facilities. Such residues should not be discharged to the sea or incinerated on board.

The Sub-Committee on Pollution Prevention and Response (PPR) is undertaking a review of the 2015 Guidelines on Exhaust Gas Cleaning Systems (EGCS). The guidelines include, among other things, wash water discharge standards.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

BUNKER DELIVERY NOTES

For vessels of 400 gross tonnage and above, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in Appendix V.

The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board.

There The BDNs shall have a format in accordance with Appendix V of MARPOL Annex VI, as amended by MEPC.286(71).

ADDITIONAL REQUIREMENTS FROM VARIOUS MEMBER STATES

Some IMO Member States have taken a precautionary approach towards washwater discharge and have taken measures to limit or restrict discharge of washwater in their local ports and coastlines. States have the right under UNCLOS to adopt their own laws and measures to reduce and control pollution of the marine environment from ships in their ports, internal waters and territorial seas.

Various other coastal states and ports are discussing enforcing similar bans citing the adverse effects of scrubber washwater on the marine environment. It is therefore likely that the above list of states/ports which currently regulate open loop scrubber discharges in their waters could grow over time. In those areas where the discharge of washwater is not permitted, vessel operators have two options to choose from to ensure compliance with the sulphur limits :

- use compliant fuel instead of open loop scrubbers; or
- switch over to closed loop mode of operation, in which case it will be necessary to convert currently installed open loop systems to closed loop or hybrid systems, if not already done.

Any changeover should be carried out well in advance of the vessel entering the areas with prohibition or restrictions in place. This will help in identifying operational issues, if any, after the changeover, and will allow for sufficient time to rectify such before the vessel enters the area.

Owners should check before calling at a port if the port has any ban or additional requirements relating to the use of open loop scrubbers or for dealing with wash waters from scrubbers.

List of ports along with their released notices can be found in Annex 3 of this Publication.

SHIP IMPLEMENTATION PLAN

The Marine Environment Protection Committee at its seventy-third session (MEPC 73), approved Resolution **MEPC.1/Circ.878** that provides guidelines on the development of Ship Implementation Plan for the consistent implementation of the **0.50%** Sulphur Limit under MARPOL Annex IV, containing also an indicative template for such Implementation Plan.

The development and adherence to the ship specific Implementation Plan is highly recommended in order to ensure that the change to compliant fuel is achieved as smoothly as possible, helping the crew to better deal with the associated challenges.

Items recommended to be addressed through such a plan include :
risk assessment and mitigation plan on the impact of new fuels (compatibility and stability issues); modifications of the fuel oil system and tank cleaning (if needed); fuel oil capacity and segregation capability; procurement of compliant fuel; fuel oil changeover and documentation and reporting .

A ship having on board a suitably developed Implementation Plan with corresponding records being maintained, could be in a better position during port State control. Attention is also brought to the Guidance on best practice for fuel oil purchasers/users for assuring the quality of fuel oil used on board ships, as per **MEPC.1/Circ.875.**

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

FUEL OIL NON-AVAILABILITY REPORT (FONAR)

If a ship simply cannot obtain compliant fuel oil, they can complete a Fuel Oil Non-Availability Report (**FONAR**) . The IMO has developed further guidance, including a FONAR, which is included in MEPC.320(74) /Appendix 1 and can be found in **Annex 1** of this Publication.

This can be taken into account by Port State Control **but is not an exemption** and ships are required to make every best effort to obtain compliant fuel.

Under Regulation 18 of **MARPOL Annex VI,** it will be possible to submit a **FONAR** to State parties recording the steps taken when a ship cannot acquire compliant fuel.

It is important to remind that a FONAR is not an exemption; it is one of a number of documents to be considered by State parties when considering enforcement action against a non-compliant ship. When facing enforcement action, Owners should be able to fully document the efforts which they have taken to comply.

Any FONAR application along with correspondence with flag and next port PSC should be available on board. It is important to understand that FONAR should be used only as a last resort and should not be used repeatedly. Condition for approval of FONAR is expected to be very strict and repeated applications by a particular operator will attract negative attention.

Should a ship, despite its best effort to obtain compliant fuel oil, be unable to do so, the master/company must :

1- present a record of actions taken to attempt to bunker correct fuel oil and provide evidence of an attempt to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase; and

2- best efforts to procure compliant fuel oil include, but are not limited to, investigating alternate sources of fuel oil prior to commencing the voyage. If, despite best efforts, it was not possible to procure compliant fuel oil, the master/Company must immediately notify the port State Administration in the port of arrival and the flag Administration **(regulation 18.2.4 of MARPOL Annex VI) .**

In order to minimize disruption to commerce and avoid delays, the master/company should submit a FONAR as soon as it is determined or becomes aware that it will not be able to procure and use compliant fuel oil.

Even if a FONAR is accepted, the disadvantages and hassle following a FONAR situation may in many cases outweigh possible benefits from using cheaper non-compliant fuel. For instance, with the carriage ban for fuel exceeding 0.50% sulphur taking effect on 01 March 2020, the handling of any excess non-compliant fuel after a FONAR situation will be subject to the discretion of the PSC in cooperation with the flag and ship. In worst case, this could mean de-bunkering the ship, followed by tank cleaning, which can prove very costly and time-consuming.

A limited exception to the 2020 Global Sulphur Cap requirements is allowed for any emission necessary to secure the safety of the ship, saving life at sea or any emission resulting from accidental damage to a ship or its equipment (subject to certain conditions).

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

INVESTIGATING NON-AVAILABILITY .

A Party should investigate the reports of non-availability. This process is important to ensure a consistent supply of compliant fuel to industry, as well as prevent incentives for ships to use ports where it is known that compliant fuel is not available on an ongoing basis. Critical to this process will be the sharing of information between Member States on reported compliant fuel oil supply issues.

Regulation 18.2.5 of MARPOL Annex VI provides that a Party to MARPOL Annex VI notify the Organization when a ship has presented evidence of the non-availability of compliant fuel oil in a port or at their terminal. For this purpose, MARPOL Annex VI GISIS module provides the platform for Parties to upload such notifications.

Regulation 18.1 of MARPOL Annex VI provides that each Party take all reasonable steps to promote the availability of above compliant fuel oil and inform the Organization through MARPOL Annex VI GISIS module of the availability of compliant fuel oils in its ports and terminals.

POSSIBLE SAFETY IMPLICATIONS RELATING TO FUEL OILS MEETING THE 0.50% M/M SULPHUR LIMIT.

Identified potential safety implications include, but are not limited to, the following :

1- stability of blended fuel oil;
2- compatibility, including new tests and metrics appropriate for future fuels;
3- cold flow properties;
4- acid number;
5- flash point;
6- ignition and combustion quality;
7- cat fines;
8- low viscosity; and
9- unusual components.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

TANK CLEANING

Appendix 3 of the Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI **(MEPC.1/Circ. 878)** includes an Additional Guidance for the development of the Ship Implementation Plan on Tank Cleaning.

Most ships will have been using high viscosity high sulphur fuel oil (HSFO) based primarily on residual fuel oils. Such fuels tend to adhere to the inside of fuel tanks forming layers of semi-solid substances containing sediments and asphaltenic sludge; such residues will also typically have solidified and settled in various parts of the fuel oil service system including pipelines, settling and service tanks.

Owners may choose to clean the fuel oil tanks of these residues before loading compliant fuel prior to 1 January 2020 based on the following considerations.

Some of the fuels complying with the 0.50% sulphur limit are expected to be very paraffinic due to crude sources of blending components and also a high content of distillate components. If such fuels are loaded into HSFO fuel tanks that have not been cleaned, there is a possibility that they could dissolve and dislodge sediments and asphaltenic sludge in storage tanks, settling tanks and pipelines, potentially leading to purifier and filter operational issues and in extreme cases fuel starvation resulting in loss of power.

Alternatively, ships have been using ship specific changeover procedures to effectively and safely load on top of existing fuel oil and gradually flushing through the fuel system until the sulphur content in the fuel oil is at a compliant level.

If Owner determines it is appropriate to clean the ship's fuel oil tanks and system, the following considerations may need to be taken into account when making arrangements for tank cleaning.

OPTIONS FOR TANK CLEANING, APPROXIMATE TIMELINES AND CONSIDERATIONS.

Fuel oil tanks are normally cleaned on a regular basis on ships to remove built-up sediments and sludge, usually during dry docking and whenever inspections of the fuel tanks are due. However, leading up to 1 January 2020, it would not be practicable for the majority of the global fleet that has been running on HSFO and decided to opt for tank cleaning to undergo dry docking during a very short period. Hence, other options for cleaning tanks and fuel oil systems during service may need to be considered.

The time and work involved in cleaning HSFO tanks cannot be defined precisely, as it will vary depending on how long it has been since the last time the tanks were cleaned, the condition of the tank coating and the effectiveness of the cleaning process itself. The estimates in this document may err on the side of caution as it is almost impossible to pinpoint at what stage the ship's fuel oil system is sufficiently clean to guarantee compliance.

1- MANUAL CLEANING DURING DRY DOCKING.

Time required varies; it can be done in 2 to 4 days per tank. In addition to cleaning tanks, all of the pipe work in the fuel oil service system needs to be flushed through. Overall, it may take 1 to 2 weeks.

A ship that has had all its fuel oil tanks and fuel system cleaned can start loading compliant fuels and expect to be fully compliant right away.

However, if only the tanks have been cleaned in dry dock, it could take 2 to 5 days to flush through the pipe work in the fuel oil service system to ensure full compliance with the 0.50% sulphur limit.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

2- MANUAL CLEANING DURING SERVICE.

If tanks are to be cleaned manually during service, risk assessment and safety measures are paramount; refer to IMO resolution A.1050(27) on Revised recommendations for entering enclosed spaces aboard ships.

Time required will vary depending on tank size and the number of tanks, how long it has been since the last tank cleaning and the number of crew available to perform safe and complete tank cleaning operations. Tank cleaning can be performed by the ship's crew and/or by employing a riding crew for this purpose. It is always good practice to inspect the tank once cleaned to check its condition and to inspect heating coils, conduct pressure tests and undertake repairs as necessary.

If the cleaning is done by the ship's existing crew, it would likely take a minimum of 4 days per tank. For an average tank, a week should be allowed. If employing a riding crew to clean the tanks, if working in shifts, it would likely take a minimum of 2 days to clean a tank, but 4 days per tank should be allowed.

Tanks need to be empty before they can be cleaned, hence the time needed to drain tanks needs to be taken into account when estimating the overall time required.

In addition to cleaning tanks, all of the pipework in the fuel oil service system needs to be flushed. Flushing the remaining pipework and fuel oil service system after all tanks have been cleaned could take another 1 to 2 days.

The residues from tank cleaning should be retained on board until they can be disposed of correctly or disposed to shore reception facilities.

3- CLEANING TANKS IN SERVICE WITH SPECIALIZED ADDITIVES.

As an alternative to manual cleaning, consideration can be given to gradually cleaning the sediments and asphaltenic sludge from HSFO tanks and fuel systems by dosing additives..

There are successful examples of this approach for ships that needed to reallocate HSFO tanks to fuels complying with the 0.10% sulphur limit that took effect in ECAs in 2015.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

PORT STATE CONTROL INSPECTIONS.

Port States shall take appropriate measures to ensure compliance with the 0.50% of sulphur limit under MARPOL Annex VI. More specifically, the port State should conduct initial inspections based on documents and other possible materials, including remote sensing and portable devices. Given "clear grounds" to conduct a more detailed inspection, the port State may conduct sample analysis and other detailed inspections to verify compliance to the regulation, as appropriate.

Regulation 18.2.3 of MARPOL Annex VI requires a Party to take into account all relevant circumstances and the evidence presented to determine the action to take, including not taking control measures.

Administrations and port State control authorities may take into account the implementation plan when verifying compliance with the 0.50% sulphur limit requirement.

INSPECTIONS BASED ON DOCUMENTS AND OTHER POSSIBLE TARGETING MEASUREMENTS.

During the port State control and other enforcement activities, the port State should investigate whether a ship carries either compliant fuel oils or HSHFOs for use, based on the documents listed in paragraph 2.1.2 of the 2019 PSC Guidelines additionally records required to demonstrate compliance should also then be viewed.

Results from remote sensing could be used to trigger inspections and portable devices could be used during the initial inspections, as appropriate. Remote sensing and portable devices are, however, of indicative nature and should not be regarded as the evidence of non-compliance but may be considered clear grounds for expanding the inspection.

Port state should determine if regulations 3.2, 4 or 18.2.3 apply together with retained bunker delivery notes and IAPP Certificate when considering the status of any HSHFO being carried for use on board.

FUEL OIL SAMPLE ANALYSIS.

When the port State identifies clear grounds of suspected non-compliance of a ship based on initial inspections, the port State may require samples of fuel oils to be analysed. The samples to be analysed may be either the representative samples provided with BDN in accordance with regulation 18.8.2, MARPOL delivered samples or samples from designated sampling points in accordance with the 2019 Guidelines for onboard sampling for the verification of the sulphur content of the fuel oil used on board ships **(MEPC.1/Circ.864/Rev.1)** (in-use fuel oil samples) or other samples obtained by the port State.

Where the MARPOL delivered sample is taken from the ship a receipt should be provided to the ship. The outcome of the analysis undertaken with appendix VI of MARPOL Annex VI should be advised to the ship for its records.

In detecting suspected non-compliance, the sample analysis should be conducted in a uniform and reliable manner as described in paragraph 4.1.2. The verification procedure for MARPOL delivered samples should be in accordance with appendix VI7 of MARPOL Annex VI. For other samples taken on board the ship, the in-use and onboard sample, the sample should be deemed to meet the requirements provided the test result from the laboratory does not exceed the specification limit +0.59R (where R is the reproducibility of the test method) and no further testing is necessary.

Notwithstanding the above process, all possible efforts should be made to avoid a ship being unduly detained or delayed. In particular, sample analysis of fuel oils should not unduly delay the operation, movement or departure of the ship.

If a non-compliance is established, consistent with regulation 18.2.3 the port State may prevent the ship from sailing until the ship takes any suitable measures to achieve compliance which may include de-bunkering all non-compliant fuel oil. In addition, the port State should report the information of the ship using or carrying for use non-compliant fuel oil to the Administration of the ship and inform the Party or non-Party under whose jurisdiction a bunker delivery note was issued of cases of delivery of non-compliant fuel oil, giving all relevant information. Upon receiving the information, the Party detecting the deficiency will be reporting the information to the MARPOL Annex VI GISIS module.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

The Port and Flag State; however, may permit, with the agreement of the destination port authority, a single voyage for bunkering of compliant fuel oil for the ship, in accordance with regulation 18.2.4 of MARPOL Annex VI. The single voyage should be one way and minimum for bunkering, and the ship proceeds directly to the nearest bunkering facility appropriate to the ship. In the case that the parties permit a single voyage of a ship, the port State should confirm that the Administration of the ship has advised the authority at the destination port of the approval for a single voyage including information on the ship granted with the approval and the certified record of analysis of the sample as the evidence. Once confirmation has been provided the port State should permit the ship to sail as agreed.

If the port State is made aware that a ship is carrying non-compliant fuel oil, which is not for use through an equivalent method under regulation 4 or a permit under regulation 3.2 of MARPOL Annex VI, the port State should take action to confirm the fuel is not being used. Action to confirm should include but is not limited to the examination of the oil record book and the record of tank soundings. Where necessary the port State may require tank soundings to be undertaken during the inspection. Where it is determined that the fuel has been used the control action in paragraph 4.2.4.5 should be applied.

Other open-sea compliance monitoring tools :
1. fuel oil changeover calculator;
2. data collection system for fuel oil consumption of ships (Resolution MEPC.278(70)); and
3. continuous SOX monitoring.

NON-COMPLIANT FUEL OIL.

In the case of non-compliant fuel oil, communication between the ship and the port State should occur.
The ship and the port State should consider the following as possible contingency measures :

1- actions predetermined in the Ship implementation plan, if available, for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI (MEPC.1/Circ.878);
2- discharging non-compliant fuel oil to another ship to be carried as cargo or to an appropriate shipboard or land-based facility, if practicable and available;
3- managing the non-compliant fuel oil in accordance with a method acceptable to the port State; and
4- 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.

Having considered all of the above option, the non-compliant fuel oil may be discharged to the port or retained on board, as acceptable to the port State. Port State consideration may include environmental, safety, operational and logistical implications of allowing or disallowing the carriage of non-compliant fuel oil. The carriage of non-compliant fuel oil is subject to any conditions of the port State.

The port State, the flag State and the ship should work together to agree on the most appropriate solution, taking into account the information provided in the Fuel Oil Non-Availability Report (FONAR), to address the non-compliant fuel oil.

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.

Annex 2 of this Publication contains an indicative checklist for Owners that is recommended to be used in order to check compliance with IMO 2020.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

ANNEX 1 – FUEL OIL NON-AVAILABILITY REPORT (FONAR).

1	**Particulars of ship**	
1.1	Name of ship	
1.2	IMO Number	
1.3	Flag	
1.4	Distinctive Number or Letters	
2	**Description of ship's voyage plan**	
2.1	Provide a description of the ship's voyage plan in place at the time of entry into ''country X'' waters (and ECA, if applicable) (Attach copy of plan if available) :	
2.2	**Details of voyage.**	
2.2.1	Last port of departure:	
2.2.2	First port of arrival in ''country X'':	
2.2.3	Date of departure from last port:	
2.2.4	Date of arrival at first ''country X'':	
2.2.5	Date ship first received notice that it would be transiting in ''country X'' waters (and ECA, if applicable):	
2.2.6	Ship's location at the time of notice:	
2.2.7	Date ship operator expects to enter ''country X'' waters (and ECA, if applicable):	
2.2.8	Time ship operator expects to enter ''country X'' waters (and ECA, if applicable) :	
2.2.9	Date ship operator expects to exit ''country X'' waters (and ECA, if applicable):	
2.2.10	Time ship operator expects to exit ''country X'' waters (and ECA, if applicable):	
2.2.11	Projected days ship's main propulsion engines will be in operation within ''country X'' waters (and ECA, if applicable):	
2.2.12	Sulphur content of fuel oil in use when entering and operating in ''country X'' waters (and ECA, if applicable):	
3	**Evidence of attempts to purchase compliant fuel oil**	
3.1	Provide a description of actions taken to attempt to achieve compliance prior to entering ''country X'' waters (and ECA, if applicable), including a description of all attempts that were made to locate alternative sources of compliant fuel oil, and a description of the reason why compliant fuel oil was not available:	
3.2	Name and email address of suppliers contacted, address and phone number and date of contact (dd-mm-yyyy):	
4	**In case of fuel oil supply disruption only**	
4.1	Name of port at which ship was scheduled to receive compliant fuel oil:	
4.2	Name, email address, and phone number of the fuel oil supplier that was scheduled to deliver (and now reporting the non-availability):	

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

5	**Operation constraints, if applicable**	
5.1	If non-compliant fuel has been bunkered due to concerns that the quality of the compliant fuel available would cause operational or safety problems on board the ships, the concerns should be thoroughly documented.	
5.2	Describe any operational constraints that prevented use of compliant fuel oil available at port:	
5.3	Specify steps taken, or to be taken, to resolve these operational constraints that will enable compliant fuel use:	
6	**Plans to obtain compliant fuel oil**	
6.1	Describe availability of compliant fuel oil at the first port-of-call in ''country X'', and plans to obtain it:	
6.2	If compliant fuel oil is not available at the first port-of-call in ''country X'', list the lowest sulphur content of available fuel oil(s) or the lowest sulphur content of available fuel oil at the next port-of-call:	
7	**Previous Fuel Oil Non-Availability Reports**	
7.1	If shipowner/operator has submitted a Fuel Oil Non-Availability Report to ''country X'' in the previous 12 months, list the number of Fuel Oil Non-Availability Reports previously submitted and provide details on the dates and ports visited while using non-compliant fuel oil, as set out below :	

Report	Date	Port	Type of Fuel	Comment

8	**Master/Company information**	
	Master name	
	Local agent in ''country X'':	
	Ship operator name:	
	Shipowner name:	
	Name and position of official:	
	Email address:	
	Address (street, city, country, postal/zip code):	
	Telephone number:	

Signature of Master:	
Print name:	
Date:	

PACIFIC MARINE SERVICES

ANNEX 2 – PORT STATE CONTROL CHECKLIST

From 1 January 2020 Port State Control Officers shall check compliance with the implemented regulations through the bunker delivery notes and related ships' log books and records and by means of sampling from the fuel lines. Below indicative checklist means to assist Shipowners to crosscheck compliance of their fleet.

No	Item	YES	NO	N.A
INITIAL INSPECTION				
The first stage of the inspection is likely to be a review of the vessel's documentation that relate to fuel sulphur compliance:				
1	Ship's certificates relating to MARPOL Annex VI (e.g. IAPPC + supplement, EIAPPC)	YES	NO	N.A
2	Bunker delivery notes (BDN) retained as required			
3	Bunker operation checklists			
4	Oil Record Book(s) – Part 1			
5	Bunker certificates of quality			
6	Ship implementation plan			
7	Is the Master and ship's personnel familiar with essential fuel oil management procedures?			
8	If using different fuels for compliance (e.g. 0.50%S max and 0.10%S max) :			
9	Written fuel changeover procedures in a working language			
9.1	Records of fuel changeovers when entering and exiting emission control areas (ECAs)			
10	If non-compliant fuel is on board or the fuel is suspected to be non-compliant:			
10.1	Any notification to the flag State, destination port State and the authorities of the country of where bunkers were delivered			
10.2	Any letters of protest issued by the vessel and other commercial documentation relevant to non-compliant bunker delivery			
10.3	Any FONAR submissions with supporting evidence			
11	If vessel is fitted with exhaust gas cleaning systems (EGCS):			
11.1	Certificates to show EGCS is an approved "equivalent means" of compliance			
11.2	BDN of high sulphur bunkers indicates that it is to be used on unit with EGCS			
11.3	Evidence that the EGCS is operational and is being used			
11.4	Any notifications to flag State and destination port State of EGCS malfunctions			
11.5	If there has been any malfunction to the monitoring instrumentation, provide alternative documentation to prove compliant operation			

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

No	Item	YES	NO	N.A
MORE DETAILED INSPECTION[1]				
Fuel Sampling				
If the vessel is not fitted with EGCS, or the use is prohibited in port, then PSC are likely to check that its fuel is compliant. This may require testing of: ▪ the MARPOL delivered sample (drawn at time of bunkering and retained by the vessel) ▪ the not-in-use onboard sample (drawn from the vessel's bunker storage tanks during inspection) ▪ The in-use sample (drawn as close as possible to the engine inlet during inspection)				
If requested by PSC to draw samples of the fuel in use, consider the following:				
1	Does the proposed sampling point allow for a sample to be drawn safely?			
2	Does the proposed sampling point allow for a representative sample to be taken?			
3	Does the chief engineer and PSCO agree on the sampling point?			
4	Are samples drawn into clean suitable bottles and sealed with identification tags?			
Documentation				
The ship's records are likely to come under greater scrutiny. This includes:				
1	Do the fuel consumption logs accurately reflect the current remains on board and record the fuel used when in and outside ECA?			
2	Is there enough compliant fuel on board to reach the next destination?			
3	Are the crew familiar with the onboard operational procedures and record-keeping requirements relating to bunkers?			
4	If vessel is fitted with exhaust gas cleaning systems (EGCS) :			
5	Has the EGCS and its monitoring systems been installed and operated in accordance with the manufacturer's instruction?			
6	Are the monitoring systems fully operational, tamper-proof and allow continuous monitoring?			
7	Can the vessel evidence compliance with the parameters listed in the system documentation?			
8	Are the crew familiar with correct operation of the EGCS and the record-keeping requirements?			

[1] If the initial inspection gives clear grounds for port State to believe that the condition of the vessel and its equipment do not correspond with the documentation or the crew are not familiar in the relevant operations, this may escalate to a more detailed inspection.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

ANNEX 2 – PORT STATE CONTROL CHECKLIST

Area	Country	Port	Policy	Summary
AFRICA	South Africa		In Marine Notice no. 08 of 2019 South Africa has indicated that it accepts all types of approved scrubbers including open loop scrubbers as long as the IMO discharge criteria set out in Resolution MEPC.259(68) is met. However, recent reports indicate that South Africa may reconsider its position on the acceptance of open loop scrubbers.	All EGCS Types are allowed, wash water discharge shall be according to IMO guidelines.
AMERICA	Bermuda		Use of open loop scrubbers is not permitted. Environmental Policy for Ships states: "Washwater and residue from the EGCS shall be not disposed of in Bermuda or discharged into Bermuda's waters but shall be stored on board the ship until outside of Bermuda's waters". If a vessel has to use closed loop scrubber in territorial waters of Bermuda, permission needs to be sought from the authorities.	Open loop EGCS not permitted nor washwater and residues. Use of closed loop EGCS required permission from the authorities
	Panama		Notice to Shipping No. 01 of 2019 states that discharging EGCS washwater into bodies of water under the responsibility of Panama Canal is not permitted. Use of closed loop systems is permitted.	Discharging EGCS washwater into bodies of water under the responsibility of Panama Canal is not permitted. Use of closed loop systems is permitted.
	USA	Hawaii	Conditional section 401 WQC (Water Quality Certification) as mentioned in section 6.7 of 2013 VGP allows for discharge of washwater subject to certain requirements being fulfilled. These requirements can be found in the same section.	Allows for discharge of washwater subject to certain requirements being fulfilled. (Requirements included in the same section)
		Connecticut	Connecticut has laid down specific conditions as part of the 2013 Vessel General Permit (VGP) requirements. In accordance with section 6.5.9[UK1] of the 2013 VGP, discharge of exhaust gas scrubber washwater into Connecticut waters from any vessel covered under the VGP is prohibited. Please see CGS section 22a-427, and Connecticut Water Quality Standards (CT WQS).	Specific conditions have been established. Vessel General Permit (VGP) requirements. Discharge of EGCS washwater into Connecticut waters from any vessel covered under the VGP is prohibited.
		California	The CARB OGV (California Air Resource Board for Ocean Going Vessels) regulations do not permit the use of abatement technologies such as scrubbers, hence their use as well as any discharge of washwater is prohibited. Vessel discharge regulations for Port of Long Beach also state that it is prohibited to discharge washwater from scrubbers in port waters. However, pursuant to CARB's Marine Notice 2017-1 discharge is permitted if the vessel has an experimental or temporary research permit.	Do not permit the use of abatement technologies such as EGCS thus; any discharge of washwater is prohibited. Long Beach state prohibited the discharge washwater from EGCS in port waters. Discharge is only permitted if the vessel has a temporary research or experimental permit.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

Area	Country	Port	Policy	Summary
ASIA	China		China's Ministry of Transport (MOT) issued its 'Notice on Regulating the Implementation of Supervision and Management of Ship Air Pollutant Emission Control Areas' which states that from 1 January 2019 discharge of washwater from scrubbers is prohibited in the county's inland emission control areas (ECAs), port water areas of coastal domestic ECAs and Bohai Bay waters. The document also states that a ban in the entire coastal domestic ECA will be announced in due course. Our local correspondent, Huatai, has published a useful circular on China's ban on scrubber washwater discharge, which can be accessed here. China MOT recently circulated a draft recommending that the ban on the discharge of washwater be extended to within 12nm of all coastal areas and regions near the southern island province of Hainan.	From 1st January 2020, the wash water of open-loop exhaust gas cleaning systems should not be discharged into waters of DECAs. Ban on the discharge of washwater be extended to within 12nm of baseline of China´s territorial sea and regions near the southern island province of Hainan.
	Hong Kong		If a ship intends to use scrubbers in Hong Kong waters, to meet the sulphur cap requirements, application must be made to the Hong Kong authorities requesting for an exemption from using compliant fuel. The exemption application must be made at least 14 days prior to a ship's first visit to Hong Kong after 1 January 2019. For details of the exemption application process, please refer to Sections 7 to 11 of the new 'Air Pollution Control (Fuel for Vessels) Regulation'.	Hong Kong authorities shall be requested for an exemption from using compliant fuel. The exemption application must be made at least 14 days prior to a ship's first visit to Hong Kong after 1 January 2019.
	India		In DG Engineering Circular 02 of 2019, India appear to indicate that scrubber washwater discharges are allowed if the criteria set out in MEPC.259(68) are met. However, this is qualified with a requirement that local regulations should also be followed. As of now, it is not clear if local restrictions will be imposed in some areas.	EGCS washwater discharges are allowed if the criteria set out in MEPC.259(68) are met. Local restrictions will be imposed in some areas, please verify prior arrival.
	Malaysia		At the Low Sulphur Bunker Fuels seminar held in Kuala Lampur on 29 August 2019, Malaysia announced that it could introduce a ban on open loop scrubbers. However, there is no official marine notice or circular confirming at the moment.	Prohibited the use of open-loop EGCS. Ships are banned from releasing washwater from open-loop EGCS while operating in Malaysian waters.
	Singapore		According to the Maritime and Port Authority of Singapore (MPA), discharge is prohibited in Singapore port waters from 1 January 2020. MPA has published useful guidance on IMO's 2020 Sulphur limits which can be accessed here. The document advises ships fitted with open loop scrubbers to *'carry out the switch to either closed-loop mode or to compliant fuel well in advance of the vessel's arrival at the port waters'*. Residues from scrubbers have been classified as toxic industrial waste under Singapore's Environmental Public Health (Toxic Industrial Waste) Regulations. It can only be collected by licensed Toxic Industrial Waste Collectors.	Discharge is prohibited in Singapore port waters from 1 January 2020.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES

Area	Country	Port	Policy	Summary
	UAE	Abu Dhabi	In 2013 Abu Dhabi authorities issued 'Vessel Discharge and Maintenance Guidelines For Owners, Masters And Agents'. It states that scrubber washwater can be discharged in port waters if free form pollutants whilst scrubber sludge should be discharged from the vessel to an Abu Dhabi Ports Company (ADPC) licensed waste disposal contractor.	EGCS washwater can be discharged in port waters if free form pollutants whilst scrubber sludge should be discharged from the vessel to an Abu Dhabi Ports Company (ADPC) licensed waste disposal contractor.
		Fujairah	As per notice to mariners no. 252, Harbour Master of Fujairah has announced that use of open loop scrubbers will be banned in port waters.	The use of open-loop scrubbers in its waters has been banned.
EUROPE	Belgium		The European Commission's 2016 note on discharge of scrubber washwater, bans the discharge in ports and inland waters. Relevant legislation is 'Wet van 26 maart 1971 op de bescherming van de oppervlaktewateren tegen verontreiniging (Vlaams Gewest)'.	Prohibit the discharge in ports and inland waters.
	Germany		Discharge is not allowed in inland waterways and the Rhine, pursuant to Articles 1 and 3 of the CDNI Convention (Convention on the Collection, Deposit and Reception of Waste Produced during Navigation on the Rhine and Inland Waterways).	Discharge is not allowed in inland waterways and the Rhine.
	Ireland	Dublin	The Irish authorities' Notice No. 37 of 2018 'Prohibition on the Discharge of Exhaust Gas Scrubber Wash Water' stipulates that discharge of washwater is prohibited in waters under Dublin port jurisdiction. Dublin port jurisdiction includes waters from the Matt Talbot Memorial Bridge eastwards to a line from the Baily Lighthouse through the North and South Burford buoys and through Sorrento Point.	Discharge of washwater is prohibited in waters under Dublin port jurisdiction. Dublin port jurisdiction includes waters from the Matt Talbot Memorial Bridge eastwards to a line from the Baily Lighthouse through the North and South Burford buoys and through Sorrento Point.
		Waterford	As per Port of Waterford's marine notice 'Prohibition on the Discharge of Exhaust Gas Scrubber Wash Water', discharge of scrubber washwater is prohibited in port limits from the start of January 2019.	EGCS washwater discharge is prohibited in port limits from the start of January 2019.
		Cork	Port notice No. 15 of 2018 states that given the potential for impact on sensitive ecosystems, and the abundance of Natura 2000 sites within the jurisdiction of the port company, discharge of scrubber washwater is prohibited in port waters.	Discharge of scrubber washwater is prohibited in port waters.
	Latvia		General position, as mentioned in the European Commission's 2016 note, is that discharge is not allowed in territorial and port waters. Discussions are currently ongoing within the European Commission, on improving the regulations and to provide more clarity.	Discharge is not allowed in territorial and port waters.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

Area	Country	Port	Policy	Summary
	Lithuania		The authorities are currently studying the impact of scrubber washwater on the marine environment and will provide its conclusions upon completion of the study. Meanwhile, the current position seems to be that discharge is not allowed in port waters, according to port rules and conditions of use approved by the Ministry of Transport. Reference is made to the European Commission's 2016 note on discharge of scrubber washwater.	Discharge is not allowed in port waters, according to port rules and conditions of use approved by the Ministry of Transport.
	Norway		Under the amendments of 1 March 2019 to Regulation No.488 on the environmental safety of ships and mobile offshore units, use of open loop scrubbers is prohibited in the Norwegian fjords. Also, for ships using closed or hybrid type scrubbers, a device for reducing visible emissions to air is required.	Open loop EGCS is prohibited in the Norwegian fjords. Also, for ships using closed or hybrid type scrubbers, a device for reducing visible emissions to air is required.
OCEANIA	Australia		Bans on the discharge of washwater from open loop scrubbers have not been imposed by any state. This is indicated in the summary of the 6th roundtable discussion hosted by AMSA and MIAL. It is stated that authorities are currently looking at the impact of scrubber discharges.	Discharge of washwater from open loop scrubbers have not been imposed by any state.

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

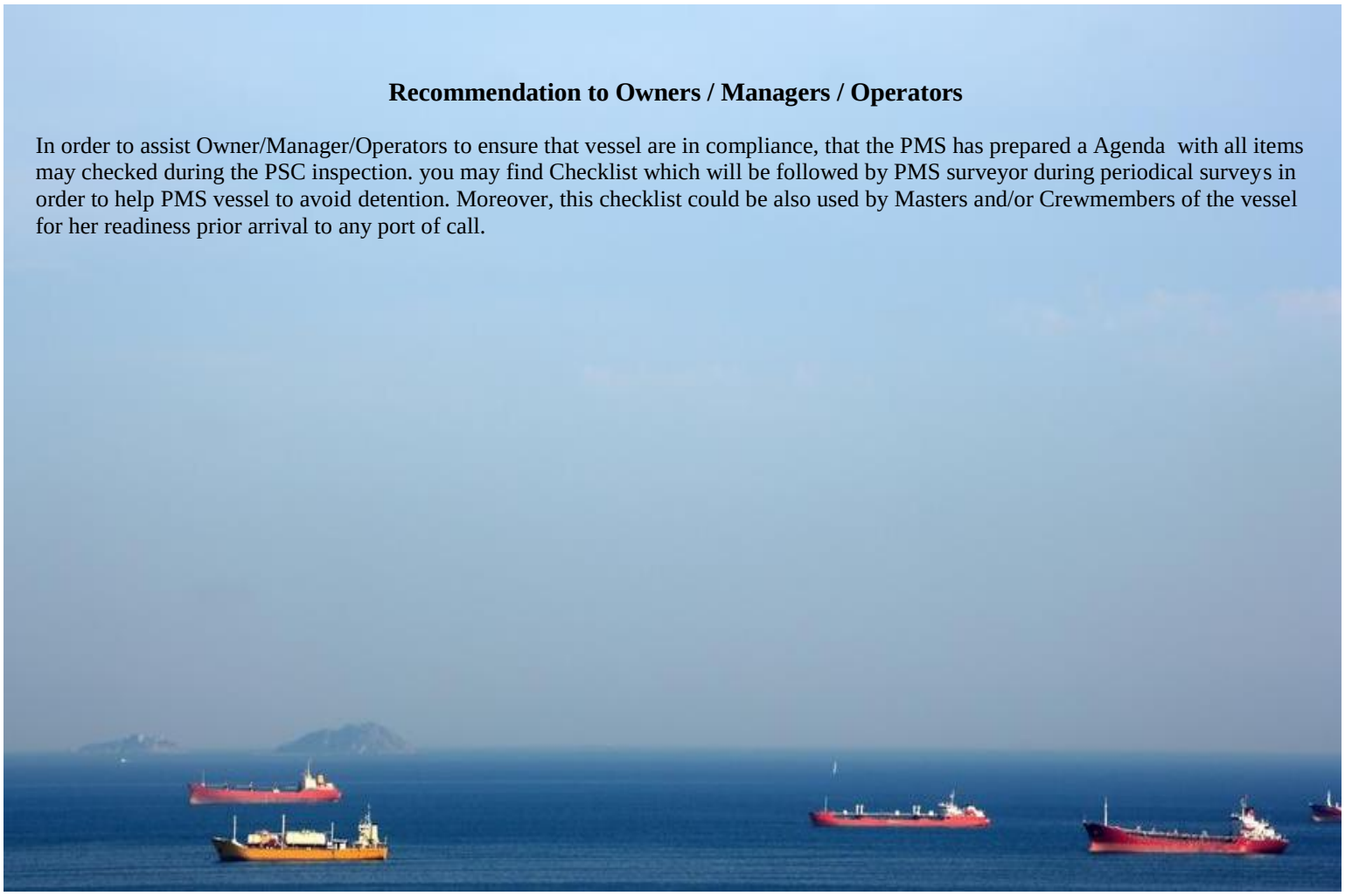
PACIFIC MARINE SERVICES

REFERENCES

1. International Maritime Organization (IMO) (www.imo.org).
2. MARPOL Annex VI Chapter 3
3. IMO Resolution MEPC.286(71) - Amendments To The Annex Of The Protocol Of 1997 To Amend The International Convention For The Prevention Of Pollution From Ships, 1973, As Modified By The Protocol Of 1978 Relating Thereto Amendments to MARPOL Annex VI (Designation of the Baltic Sea and the North Sea Emission Control Areas for NOX Tier III control) - (Information to be included in the bunker delivery note)
4. IMO Resolution MEPC.320(74) – 2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI.
5. IMO Resolution MEPC.321(74) – 2019 Guidelines for port state control under.
6. IMO Resolution 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.
7. IMO Resolution MEPC.1/Circ.878- guidance on the development of a ship implementation plan for the Consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI.
8. IMO Resolution MEPC.1/Circ.881 – Notification on early application of the verification procedures for a MARPOL Annex VI fuel oil sample (Regulation 18.8.2 or 14.8)
9. IMO Resolution MEPC.1/Circ.882 – Guidance for port state control on contingency measures for addressing non-compliant fuel oil
10. IMO Resolution MEPC.1/Circ.883 - Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the exhaust gas cleaning system (EGCS) fails to meet the provisions of the 2015 EGCS guidelines
11. IMO Resolution MEPC.1/Circ.884 - Guidance for best practice for Member State/coastal States
12. IMO Resolution MEPC.278(70) - Guidance for best practice for Member State/coastal States
13. IMO Resolution MSC-MEPC.5/Circ.15 - Delivery of compliant fuel oil by suppliers.
14. IMO resolution A.1050(27) on Revised recommendations for entering enclosed spaces aboard ships.
15. Panama Maritime Authority (PMA)
16. North P&I Club: 2020 Shorts: Simple suggestions on complying with the IMO 2020 Sulphur Cap

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة

PACIFIC MARINE SERVICES



Recommendation to Owners / Managers / Operators

In order to assist Owner/Manager/Operators to ensure that vessel are in compliance, that the PMS has prepared a Agenda with all items may checked during the PSC inspection. you may find Checklist which will be followed by PMS surveyor during periodical surveys in order to help PMS vessel to avoid detention. Moreover, this checklist could be also used by Masters and/or Crewmembers of the vessel for her readiness prior arrival to any port of call.

ACT NOW

To the Owners of vessels / Managers / Operators.

This publication intends to bring forward the requirements for compliance with the IMO 2020 Challenge of the Sulphur Limit.

Thanks on kind cooperation with us.

Kind Regards,

CONTACT US

For further information, please refer to PMS on Website of (www.pmsclass.org) - https://pmsclass.org/rules/pms-technical-publications/

Ajman Free Zone F.Z.E – P.O.BOX 8474 Ajman – Tel Fax 0097167411070-Mobil No 00971504500338 – Mail (pacific.m.s@eim.ae)
(pacific.m.s@eim.ae) بريد الكتروني – 00971504500338 موبايل رقم – 0097167411070 فاكس – (8474) ص.ب عجمان المنطقة الحرة