Singapore’s Preparation for the IMO 2020 Global Sulphur Limit

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Scope of Presentation

- Fuel availability and quality
- Reception facilities
- Enforcement
- Technical guidance
- Engagement with stakeholders
Availability of compliant fuel in Singapore Port

- Oil majors, bunker suppliers and cargo traders have confirmed the availability of compliant fuel (MGO, LSFO, HSFO, LNG) in Singapore come 1 January 2020

- List of licensed bunker suppliers providing compliant fuel in Singapore was published in April 2019 and available on the MPA website. Singapore's MPA releases compliant fuel suppliers list ahead of IMO 2020

- Bunker suppliers have started to enter into supply contracts with shipowners

- Shipowners have successfully completed on board fuel trials of low sulphur fuel oil in Singapore
Ensuring accuracy on quantity of fuel delivered


- All bunkering operations in Singapore are governed by TR48 to ensure bunker fuel quantity by Mass Flow Meters (MFMs)
  - MFMs mandated for marine fuel oil delivery in January 2017
  - MFMs mandated for distillates delivery in July 2019 anticipation of increased uptake as IMO2020 compliant fuel

- Ensure level playing field for both fuel oil and distillates delivery

- In preparation for IMO2020, MFMs will be checked and verified for supplying low viscosity bunker fuel
Quality of compliant fuel in Singapore Port

- SS 524:2014 (Specification for quality management for bunker supply chain (QMBS)) implemented by MPA as accreditation scheme for bunker suppliers

- Management system for bunker supply chain covering entire management system from product procurement to delivery of bunker by bunker tankers to vessels in the Port of Singapore

- Ensure quality of bunkers supplied to vessels conforms to IMO Regulations- Annex VI of MARPOL 73/78 and standards set by ISO 8217, whichever common quality parameter is more stringent

- ISO has published a Publicly Available Specification (PAS) in Sep 2019
  - “Considerations for fuel suppliers and users regarding marine fuel quality in view of the implementation of maximum 0.50% sulphur in 2020”
Reception facilities for scrubber residue

- Residues may be generated from the operation of exhaust gas cleaning system (scrubber), in particular closed-loop and hybrid scrubbers
  - Shipboard incineration of scrubber residue is prohibited (Regulation 16.2.6 of MARPOL Annex VI)
  - Parties to MARPOL are required to provide reception facilities for the collection of scrubber residue (Regulation 17 of MARPOL Annex VI)

- Singapore will provide reception facilities for scrubber residue (Port Marine Circular No.11 of 2019)
Enforcement in Singapore Port

Pre-arrival declaration (via EPAN)

Ship selected for inspection based on risk profile

Compliant fuel
- Document check (e.g. IAPP, BDN)
- Indicative fuel oil analysis using portable sulphur content test kit
- Detailed lab analysis

Scrubber
- Document check (e.g. scrubber approval certificate, operational records)
- Scrubber operational check
- Prohibition of wash water discharge from open-loop scrubbers

Non-compliant fuel
- Document check (e.g. FONAR)
- Bunker and use compliant fuel (from 1 January 2020)
- Remove non-compliant fuel (from 1 March 2020)
Enforcement in Singapore Port for use of scrubber

- Ship declares that it is fitted with scrubber
  - Document check – e.g. scrubber approval certificate, operation records
  - Scrubber operational verification

**Open-loop scrubber**
- Ship will be reminded of the prohibition of wash water discharge from open-loop scrubbers in the port of Singapore
- Ship will be instructed to stop the open-loop scrubber and use compliant fuel
- If the ship declares that it does not have compliant fuel on board, an automated email will be sent requesting the ship to bunker compliant fuel immediately upon arriving Singapore
- On board verification that ship is using compliant fuel

**Hybrid scrubber**
- Ship will be reminded of the prohibition of wash water discharge from open-loop scrubbers in the port of Singapore
- Ship will be instructed to use either compliant fuel or switch to closed-loop mode of operation
- On board verification that ship is either using compliant fuel or scrubber in closed-loop mode

**Closed-loop scrubber**
- No additional instructions
Enforcement in Singapore Port for use of compliant fuel

- Ships will be selected for routine Flag State Control (FSC) / Port State Control (PSC) inspection based on their risk profile

- Inspection will be carried out in accordance with the IMO PSC Procedures, in particular the 2019 Guidelines for PSC under MARPOL Annex VI

**Step 1: Document check**
- e.g. Bunker Delivery Note (BDN), IAPP certificate, bunker records in Oil Record Book, ISM bunkering procedure, crew familiarisation records

**Step 2: Indicative F.O. analysis**
- Portable sulphur test kit

**Step 3: Detailed F.O. analysis**
- Laboratory test, in accordance with ISO 8754:2003
Enforcement in Singapore Port for non-compliant fuel

- Unavailability of compliant fuel at previous port(s)

1 Jan 2020
- Ship will be advised to submit a completed Fuel Oil Non-Availability Report (FONAR)
- Ship to bunker compliant fuel prior to departing Singapore

1 Mar 2020 (Carriage ban)
- Ship will be advised to submit a completed Fuel Oil Non-Availability Report (FONAR)
- Ship to de-bunker all non-compliant fuel and bunker compliant fuel prior to departing Singapore
Enforcement on Singapore Ships at high seas

Ship selected based on risk profile

Compliant fuel
• Ships to submit BDN, ORB, fuel consumption record
• Conduct investigations if discrepancy found

Scrubber
• Ships to submit scrubber operation record
• Conduct investigations if discrepancy found
Technical guidance published by MPA

MPA published the 2nd edition of two guidance booklets in July 2019 to assist the industry in preparation for IMO 2020

- A Guide for Singapore registered ships
- A Guide for ships calling to Port of Singapore

Guidebook for the bunkering industry published in Oct 2019 to assist the industry in preparation for supply of compliant fuel in port come 1 Jan 2020

Advisory for Singapore-registered ships to share observations regarding scrubber installation works and operational considerations to be published by Nov 2019
Engagement with our stakeholders

- Started to engage industry on preparations for IMO2020 implementation since Oct 2018
Thank You