



CHINA RE

# 华泰保险经纪有限公司

HUATAI INSURANCE AGENCY & CONSULTANT SERVICE LTD.

**Circular Ref No.:PNI2001**

Date: 16 January, 2020

Dear Sir/Madam,

**Subject:"Guidelines for Supervision and Management of Air Pollutant Emissions from Ship" issued by China MSA in December 2019**

In order to standardize the implementation of the "Implementation Scheme of the Domestic Emission Control Areas for Atmospheric Pollution from Vessels" (hereinafter referred to as the "Scheme") issued by Ministry of Transport of the PRC as well as the "Implementation Scheme of 2020 Global Marine Fuel Oil Sulfur Cap" (hereinafter referred to as the "Scheme of Sulfur Cap"), and to provide a reference for the Maritime Authorities to carry out the supervision and management of the emission control of air pollutants from ships, China MSA issued the "Guidelines for Supervision and Management of Air Pollutant Emissions to local maritime safety administration", which will be implemented from January 1, 2020. To help ship owners and operators understand and comply with the new Regulations, we have prepared this circular to introduce the main contents of the updated requirements.

## **Inspection of fuel oil in use on the ship**

### **1. Ship Exhaust Monitoring**

The Maritime Authorities can preliminarily screen ships suspected of using fuel oil with sulfur content exceeding the standard through ship

exhaust monitoring and AIS system etc. Ships with illegal emission records and ships suspected of exceeding the oil sulfur content in fuel oil through exhaust monitoring will be the key inspection objects.

## **2. Inspection of documents**

Check the ship's engine log book, bunker delivery note, fuel consumption information report and other documents. If there is evidence that the ship has serious problems and may be detained, it can also be combined with the ship safety inspection. The specific inspection contents are as follows:

2.1 Engine log book: because the sulfur content control requirements of fuel oil in different areas within the jurisdiction of China are different, if the fuel oil needs to be changed, check the start and end time of oil change, longitude and latitude of ship position, sulfur content of fuel oil used before and after conversion, fuel oil tank stock, amount of usage of low sulfur fuel oil, operators and other information records are complete and standardized, and check whether the ship position after oil change meets with the requirements of the "Scheme" and "Scheme of Sulfur Cap".

2.2 Bunker delivery note: check whether the bunker delivery note are held and kept for 3 years as required, and whether the fuel oil recorded in the note meets the requirements, focusing on checking whether the safety and environmental protection indexes such as sulfur content, flash point, acidity, freezing point, moisture, mechanical impurities of the fuel oil meet the minimum limit requirements.

2.3 Fuel oil conversion procedure: check whether the written fuel oil conversion procedure is available on board, whether the procedure is included in the ship safety management system or other operation procedures, and whether the records of fuel oil conversion operation are standardized and complete.

2.4 FONAR<sup>®</sup>: check whether the copy is kept on board for 36 months.

2.5 Waste gas cleaning system record book (if any): check whether the records of relevant operation parameters, parts adjustment, maintenance and use during operation process of exhaust gas post-treatment device are standardized and complete.

### **3. Inspection of fuel oil**

3.1 Inspection of MARPOL delivered fuel oil sample (refer to the sample of fuel oil delivered in accordance with regulation 18.8.1 of MARPOL Annex VI)

Check whether the samples retained by the ship are sealed and signed by the representative of the supplier and the master or the officer in charge of the bunkering operation after the completion of the bunkering operation; check whether the samples were kept on board until the fuel oil is basically used up and kept for at least 12 months.

3.2 Inspection of fuel oil service system

Check whether the arrangement and drawing of the fuel oil service system of the ship meet the requirements of the specification, and whether the fuel oil service system is consistent with the drawing of the fuel oil service. For ships requiring fuel oil conversion, check whether the valves in the fuel oil service system are in the position of low sulfur oil or high sulfur oil, and verify whether the ship has actually changed the oil.

3.3 Estimation of the quantity of fuel oil used by the ship

Theoretically, the consumption of low sulfur fuel oil after the ship enters the emission control area can be estimated by the following formula:  $AX + BY + CZ$  (ton), where A is the fuel consumption rate of the main engine of the ship, unit: ton/nautical mile; B is the fuel consumption rate of the auxiliary engine, unit: ton/hour; C is the fuel consumption rate of the boiler, unit: ton/hour; X is the propulsion distance (mileage) of the main engine in the control area, unit: nautical mile; Y: service time of ship auxiliary engine in control area, unit: hour; Z: service time of ship oil

boiler in control area, unit: hour. The above parameters can be found in the deck logbook, engine logbook and other records. Check the quantity of low sulfur fuel delivered to the ship and the quantity of low sulfur fuel actually retained on the ship. Comparing the above theoretical calculation value with the actual quantity of low sulfur fuel oil retained on the ship, and preliminarily judge whether the ship has used the low sulfur fuel oil as required (all fuel oil equipment on the ship, including the main engine, auxiliary engine, boiler, etc., shall use the low sulfur fuel oil).

### 3.4 Inspection to temperature and viscosity of fuel oil

Check the oil inlet temperature and viscosity of the main engine, auxiliary engine and boiler as well as the historical trend chart (if any) and alarm record etc. for further verifying whether the ship has used low sulfur oil.

### 3.5 Inspection to fuel oil on board

By checking the bunker deliver note, oil record book and fuel oil storage in the fuel oil tank, it is verified whether the ships that do not use the sulfur oxide and particulate pollution control devices and other alternative measures such as exhaust gas cleaning system enter the waters under the jurisdiction of China since March 1, 2020 are only loaded with the fuel oil in accordance with the provisions of the "Scheme of Sulfur Cap".

### 3.6 Sampling and testing of fuel oil in use and on board

For the ships with unqualified documents, violation records or suspected violations, the Maritime Authorities shall carry out selective sampling inspection of ship fuel oil; for the ships with qualified documents, no violation records and suspected violations, the Maritime Authorities may carry out selective sampling inspection of ship fuel oil.

#### 1) Rapid test of fuel oil

The Maritime Authorities may use the rapid detection equipment to preliminarily detect the sulfur content of the fuel oil in use or on board.

According to the test results, preliminarily judge whether the sulfur content of fuel oil exceeds the standard. If the preliminary test result exceeds 10% of the standard, it is recommended to send it to the laboratory for testing, and require the ship to issue the letter of guarantee before departure.

Refer to the section of "fuel oil sampling" for the sampling work using of rapid testing equipment.

## 2) Fuel oil sampling

Take the fuel oil sample from the fuel oil service tank or the downstream pipeline of service tank, and on the premise of ensuring safety, try to be close to the combustion system (such as the fuel oil sampling point set by the ship, the last filter before the fuel oil enters the engine, or the exhaust valve closest to the fuel oil using device, etc.). The sampling work shall be carried out jointly by law enforcement officers and crew members, and may also be entrusted to a third-party organization for sampling. The sampling may be carried out in accordance with the IMO guidelines for fuel oil sampling on board. At least 3 oil samples shall be taken from the same sampling point. Each oil sample shall contain at least 400 ml of fuel oil. One shall be delivered to the ship, one shall be submitted for testing, and one shall be kept by the Maritime Authorities. Fill in the fuel oil sample label and seal number. After being signed by the ship's representative and two law enforcement officers, the label (see Appendix 1) shall be pasted on the bottle body.

IMO's relevant guidelines on fuel oil sampling on board have not been officially issued. At present, it is tentative to only sample fuel oil in use. After the relevant guidelines of IMO are issued, the fuel oil on board shall be sampled and tested according to relevant requirements.

## 3) Sample submission for testing

The law enforcement personnel shall seal the sample in a low temperature, dark and safe place, and send the sample to the fuel testing unit with

corresponding qualification in time after sampling. The fuel testing unit shall carry out the sample testing in accordance with the verification procedures specified in Appendix VI of Annex VI of "MARPOL" and the testing methods specified in the current effective national standards. The test report shall show the sulfur content of the oil products. The safety and environmental protection indexes such as viscosity, flash point, acid value, pour point, moisture, ash and "aluminum + silicon" could be tested according to the conditions. The indexes shall be compared with the requirements of national standards of marine fuel oil and diesel oil etc. The sulfur content test results shall refer to the requirements in the table below.

Applicable limit of sulfur content% m/m:V	Test Margin : W	Test result: Z		
		Z<=V	V<Z<=W	Z>W
0.10	0.11	Met the requirement	Met the requirement	Not met the requirement
0.50	0.53			
Result "Z" reported to 2 decimal places				

#### 4. Treatment of results

4.1 Vessels using or loading fuel oil that does not meet the standards or requirements shall be dealt with in one or more of the following ways according to the circumstances of the violation and in accordance with the relevant provisions of laws and regulations or international conventions:

a) Correction of irregularities. From March 1, 2020, if an international ship illegally loads non-conforming fuel oil in the waters under the jurisdiction of China, it shall take measures to unload the non-compliant fuel oil in accordance with the "Guidance for Port State Control on Contingency Measures for Addressing Non-Compliant Fuel Oil" (MEPC. 1 / CIRC. 881) of IMO, or keep the non-compliant fuel oil on the ship with the consent of the Maritime Authorities and submit a Letter of

commitment for non-use of non-compliant fuel oil in waters under jurisdiction of China.

b) Detention. If the sulfur content of any fuel oil in use or carried exceeds the applicable limit specified in Article VI/14 of MARPOL, it shall be implemented in accordance with the relevant Port State Control Guidelines issued by the IMO (subject to the final published guidelines);

c) Punished according to Article 106 of "Atmospheric Pollution Prevention and Control Law of the People's Republic of China". If the ship has left the port, the local Maritime Authorities may notify the Maritime Authorities of the next port to assist in the investigation.

*Article 106 Where a violator of this Law uses marine fuels that fail to meet the prescribed standards or requirements, the marine safety administration or fishery administrative department shall, according to its duties, impose a fine of not less than CNY10,000 but not more than CNY100,000.*

4.2 If a ship fails to keep the bunker delivery note and fuel oil samples on board as required, it shall be punished in accordance with Article 62 of "Regulation on the Prevention and Control of Vessel-induced Pollution to the Marine Environment".

**Article.62** *Under any of the following circumstances in violation of this Regulation, the Maritime Authorities institution shall impose a fine of CNY2,000 up to CNY10,000 upon the violator:*

- 1. The vessel fails to keep pollutant reception certificates as required;*
- 2. The vessel fuel supply entity fails to truthfully fill out the documents of fuel supply and acceptance;*
- 3. The vessel fuel supply entity fails to provide the documents of fuel supply and acceptance and the samples of fuel to the vessels as required;*  
*or*
- 4. The vessel or the vessel fuel supply entity fails to keep the documents of fuel supply and acceptance and the samples of fuel as required.*

5.3 If the ship fails to report the unloading of non-compliant fuel oil, it shall be punished in accordance with Article 52 of "Administrative Provisions of the People's Republic of China on the Prevention and Control of Marine Environmental Pollution by Vessels and Their Operations" and Article 46 of "Provisions of the People's Republic of China on the Administration of the Prevention and Control of Vessel-Induced Pollution to the Inland Water Environment".

**Article 52** *Where, in violation of the provisions of Article 9 or 40 of these Provisions, a vessel fails to report as required the relevant information to the maritime safety administration, the maritime safety administration shall give it a warning; and where the circumstances are serious, it shall be fined less than CNY20,000.*

**Article 46** *Where any vessel, in violation of Articles 14, 15, and 21 of these Provisions, falls under any of the following circumstances, the maritime safety administration shall order it to take corrective action, and impose a fine of not less than CNY3,000 nor more than CNY10,000 on it:*

- 1. The vessel fails to faithfully record the information on oil operations, operations for noxious liquid substances in bulk, and garbage collection and disposal.*
- 2. The vessel fails to preserve the Oil Record Book, the Cargo Record Book and the Vessel Garbage Record Book*
- 3. The vessel fails to report to a maritime safety administration as required when engaging in the on-water clearing and washing of vessel cabins, the reception of pollutants, fuel supply and reception, the building, repair, salvage, or dismantling of vessels, or pollution clean-up operations at a port.*

## **Provisions on alternative measures**

### **1. Site inspection**

For the ships with unqualified documents, violation records or suspected violations, the Maritime Authorities shall conduct on-site inspection on



the use of shore power, clean energy or new energy and the installation of exhaust gas treatment devices to verify whether the ships meet the emission control requirements.

### 1.1 Inspection of exhaust gas cleaning system

For the ships using scheme B waste gas cleaning system, check the operation of its waste gas continuous monitoring system, check whether the monitoring data are kept for 18 months as required, whether the recorded SO<sub>2</sub> / CO<sub>2</sub> ratio meets the requirements of "2015 Guidelines for exhaust gas cleaning systems" (resolution MEPC. 259 (68)), and verify the exhaust gas emission compliance of the exhaust gas cleaning system.

Check whether the ship is equipped with a washing water continuous monitoring system, check the operation of the system, check whether the monitoring data are kept for 18 months as required, and whether the recorded parameter of washing water such as PH value, PAH value and turbidity etc. meet the requirements of "2015 Guidelines for exhaust gas cleaning systems". Further sampling and inspection of washing water can be carried out to verify whether its emissions meet the requirement of "2015 Guidelines for exhaust gas cleaning systems". Check whether the ship has discharged the washing water of the open exhaust gas cleaning system in the emission control area of China. Check the direction of all residues in ship's exhaust gas cleaning system. In the case that there is no receiving port and the storage capacity of residues in ship's exhaust gas cleaning system is insufficient, it shall be clearly required that the ship shall not use mixed or closed exhaust gas cleaning system in the waters under the jurisdiction of China.

## 2. Treatment results

If the alternative measures taken against the ship fail to meet the requirements of the "Scheme" and "Scheme of Sulfur Cap", the following one or more methods shall be adopted according to the circumstances of the violation and the provisions of laws and regulations:

a) Correction of irregularities. If the ship fails to meet the equivalent emission requirements by using alternative measures such as exhaust gas post-treatment device, it can only use compliant fuel oil or clean energy and new energy, and the amount of fuel bunkered shall at least meet the fuel required for navigation during the correction period of alternative measures.

b) If the ship discharges the washing water or washing water residue of the waste gas cleaning system in violation of regulations, it shall be punished in accordance with the relevant provisions of "Water Pollution Prevention and Control Law of the People's Republic of China" and "Environmental Protection Law of the People's Republic of China";

c) Detention. If the ship's exhaust gas after treatment device does not meet the requirements of the inspection specifications, it shall be implemented in accordance with the relevant Port State Control Guidelines (subject to the final published guidelines) issued by IMO.

### **Submission and examination of the information on using and loading of fuel oil by ships**

The Maritime Authorities shall, in accordance with the requirements of the "Scheme", request the international ship which fails to obtain the compliant fuel oil, resulting in using or loading of the non-compliant fuel oil by the ship, and the next port is Chinese port to submit FONAR to the Maritime Authorities of the port through the internet platform of maritime (<https://zwfw.msa.gov.cn>) 24 hours before the arrival of the vessel in China's jurisdiction waters (the ship with a voyage less than 24 hours should submit it before departure).

After receiving the report, the Maritime Authorities shall check the integrity of the FONAR and carry out authenticity verification as the case may be. During the authenticity verification, if the ship needs to depart in advance, it shall require the ship to provide security before departure. In case of any of the following circumstances, the Maritime Authorities shall focus on inspection:

- a) Submit FONAR for many times within one year;
- b) Call at ports with insufficient supply capacity of compliant fuel oil for a long period;
- c) The submitted materials are incomplete, and are insufficient to demonstrate that the compliance fuel oil is not available;
- d) The submitted materials do not conform to the actual situation or there is fraud.

We hope the above is of assistance. Any query, please feel free to contact us.

Best regards,



Yu Limin

President

## Note:

### ① FUEL OIL NON-AVAILABILITY REPORT

MEPC 74/18/Add.1  
Annex 14, page 12

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#### APPENDIX 1

#### FUEL OIL NON-AVAILABILITY REPORT (FONAR)

##### Note:

1 This report is to be sent to the flag Administration and to the competent authorities in the relevant port(s) of destination in accordance with regulation 18.2.4 of MARPOL Annex VI. The report shall be sent as soon as it is determined that the ship/operator will be unable to procure compliant fuel oil and preferably before the ship leaves the port/terminal where compliant fuel cannot be obtained. A copy of the FONAR should be kept on board for inspection for at least 36 months.

2 This report should be used to provide evidence if a ship is unable to obtain fuel oil compliant with the provisions stipulated in regulations 14.1 or 14.4 of MARPOL Annex VI.

3 Before filing a FONAR, the following should be observed by the ship/operator:

3.1 A fuel oil non-availability report is not an exemption. According to regulation 18.2 of MARPOL Annex VI, it is the responsibility of the Party of the destination port, through its competent authority, to scrutinize the information provided and take action, as appropriate.

3.2 In the case of insufficiently supported and/or repeated claims of non-availability, the Party may require additional documentation and substantiation of fuel oil non-availability claims. The ship/operator may also be subject to more extensive inspections or examinations while in port.

3.3 Ships/operators are expected to take into account logistical conditions and/or terminal/port policies when planning bunkering, including but not limited to having to change berth or anchor within a port or terminal in order to obtain compliant fuel.

3.4 Ships/operators are expected to prepare as far as reasonably practicable to be able to operate on compliant fuel oils. This could include, but is not limited to, fuel oils with different viscosity and different sulphur content not exceeding regulatory requirements (requiring different lube oils) as well as requiring heating and/or other treatment on board.

#### 1 Particulars of ship

- 1.1 Name of ship: \_\_\_\_\_  
1.2 IMO number: \_\_\_\_\_  
1.3 Flag: \_\_\_\_\_  
1.4 (if other relevant registration number is available, enter here): \_\_\_\_\_

#### 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):

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2.2 Details of voyage:

1 – Last port of departure

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2 – First port of arrival in "country X":

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3 – Date of departure from last port (dd-mm-yyyy):

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4 – Date of arrival at first "country X" (dd-mm-yyyy):

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5 – Date ship first received notice that it would be transiting in "country X" waters  
(and ECA, if applicable) (dd-mm-yyyy):

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6 – Ship's location at the time of notice:

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7 – Date ship operator expects to enter "country X" waters (and ECA, if applicable)  
(dd-mm-yyyy):

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8 – Time ship operator expects to enter "country X" waters (and ECA, if applicable)  
(hh:mm UTC):

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9 – Date ship operator expects to exit "country X" waters (and ECA, if applicable)  
(dd-mm-yyyy):

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10 – Time ship operator expects to exit "country X" waters (and ECA, if applicable)  
(hh:mm UTC):

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11 – Projected days ship's main propulsion engines will be in operation within  
"country X" waters (and ECA, if applicable):

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12 – Sulphur content of fuel oil in use when entering and operating in "country X"  
waters (and ECA, if applicable):

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**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:

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3.2 Name and email address of suppliers contacted, address and phone number and date of contact (dd-mm-yyyy):

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Please attach copies of communication with suppliers (e.g. emails to and from suppliers)

**4 In case of fuel oil supply disruption only**

4.1 Name of port at which ship was scheduled to receive compliant fuel oil:

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4.2 Name, email address, and phone number of the fuel oil supplier that was scheduled to deliver (and now reporting the non-availability): \_\_\_\_\_

**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:

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5.3 Specify steps taken, or to be taken, to resolve these operational constraints that will enable compliant fuel use:

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**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:

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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:

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**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 (dd-mm-yyyy): \_\_\_\_\_  
Port: \_\_\_\_\_  
Type of fuel: \_\_\_\_\_  
Comments: \_\_\_\_\_

**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 (DD/MM/YYYY): \_\_\_\_\_