

標題

2019 年 1 月 1 日以降の中国における燃料油硫黄分濃度規制についての追加情報

ClassNK

テクニカル インフォメーション

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各位

2018 年 12 月 28 日付 ClassNK テクニカル・インフォメーション No.TEC-1171 においてお知らせ致しました中国における燃料油硫黄分濃度規制に関しまして、2018 年 12 月 29 日付の追加情報の通知文書を入手しましたのでお知らせ致します。尚、発行された通知文書には、スクラバ排水の禁止に関する内容が含まれております。

通知文書の URL は以下の通りです。

<http://www.msa.gov.cn/page/article.do?articleId=D383773A-FC2C-4D64-976D-1B7E8CDC13AB>

・スクラバ排水が禁止となる地域

1. Coastal Control Area (中国全域の 12 海里以内)の港湾区域
2. Inland River Control Area (長江及び西江の規制水域)
3. Bohai Area

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

一般財団法人 日本海事協会 (ClassNK)

本部 管理センター別館 技術部

住所: 東京都千代田区紀尾井町 3-3(郵便番号 102-0094)

Tel.: 03-5226-2042

Fax: 03-5226-2736

E-mail: tsd@classnk.or.jp

添付:

1. 中国交通運輸部通知文書(英語仮訳)
2. 中国交通運輸部通知文書(中国語原文)

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ClassNK 仮訳

**A Document Issued by the Bureau of Maritime Affairs under
Ministry of Transport of the People's Republic of China**

No. 555 (2018) *HWF*

**Notice about Normative Implementation of the Supervision and Management in Ship
Atmospheric-pollutant Emission Control Area Issued by the Bureau of Maritime Affairs
under Ministry of Transport of the People's Republic of China**

To: Offices under the Bureau of Maritime Affairs

In order to thoroughly implement the “*Implementation Scheme of the Domestic Emission Control Areas for Atmospheric Pollution from Vessels*” (No. 168 (2018) *JHF* and referred to as the “*Scheme*” hereinafter) and to ensure effective implementation as required by policies in the ship atmospheric-pollutant emission control area, it is now notified of the following items with regard to requirements and normative supervision and management specifications in the ship emission control that are further identified:

1. Further Identification of Requirements in the Emission Control Area

1.1 The fuel oil used in the emission control area shall be in compliance with the “*Scheme*”. The fuel oil used on inland river ships and river-sea intermodal ships that enter into the inland river control area shall be in compliance with current standards before revision of the national ship fuel oil and diesel oil standards.

1.2 Fuel oil changeover procedures for ships using low-sulfur fuel oil shall be prepared and kept it on board. Changeover of the low-sulfur fuel oil shall be completed before the ships entering into the emission control area to ensure that the low-sulfur fuel oil has been used in entering into the emission control area. The ship fuel oil changeover to high-sulfur fuel oil shall be conducted after leaving from the emission control area. The information about start and end time of the ship fuel oil changeover, longitude and latitude of the ship, sulfur content of the fuel oil used before and after changeover, remaining fuel oil in tanks and low-sulfur fuel oil usage shall be recorded in “*Engine Logbook*” or other relevant record books.

1.3 The Nitrogen Oxide emission control on ships shall be in compliance with “*International Convention for the Prevention of Pollution from Ships*”, “*Technical Code of Statutory Survey on Ships and Maritime Facilities*” and the “*Scheme*”. Measures shall be taken to achieve the emission level as equivalent as before major conversion of the engine that has impact on the Nitrogen Oxide emission level, and the application for inspection by the ship inspection authority shall be made.

1.4 The shore-power used on ships shall be operated in accordance with relevant safety operation procedures. The information about start and end time of using shore-power, operators, etc. shall be recorded in “*Engine Logbook*” or other relevant record books.

1.5 The clean energy such as natural gas and new energy and other alternatives used on ships shall not have an effect on the voyage, berthing and operation safety of ships, and shall be in compliance with relevant safety operation procedures. The usage shall be recorded in “*Engine*

Logbook” or other relevant record books. The information about usage of each fuel, time of the fuel changeover, longitude and latitude of the ship, operators, etc. of dual fuel engine shall be recorded in “*Engine Logbook*” or other relevant record books.

1.6 The certificate of exhaust gas post-treatment equipment used on a ship issued by the ship inspection authority shall be kept as required, and the equipment shall be in good operation conditions. The continuous exhaust gas monitoring system shall be installed and used on board for the exhaust gas cleaning system approved according to Scheme B of the “*2015 Guidelines for Exhaust Gas Cleaning Systems*” issued by International Maritime Organization (Resolution MEPC.259 (68)). The Nitrogen Oxide monitoring device shall be installed and used on board for the feedback control selective catalytic reduction system or the feedforward control selective catalytic reduction system which parameters such as the catalyst lifetime in normal conditions are not available. The information about start and end time of the exhaust gas post-treatment equipment used on board as well as longitude and latitude of the ship, operators, etc. shall be written in Engine Logbook or other relevant record books.

1.7 Discharge of water pollutants from the exhaust gas post-treatment equipment shall be in compliance with relevant specifications. Discharge of the wash-water from open loop exhaust gas cleaning systems into Inland River and port water of coastal control areas and Bohai Sea is prohibited. Requirements that prohibit discharge of the wash-water from open loop exhaust gas cleaning systems into waters in other coastal control areas will be timely published and implemented. Discharge of the residual of wash-water from the exhaust cleaning system or incineration on board is prohibited. Storage and disposal of the residual of wash-water from the exhaust cleaning system on board shall be recorded realistically.

1.8 In one of the following cases, it shall apply for exemption or waiver to the maritime administration in case the ship using fuel oil which is not complied with the “*Scheme*” (in the form of “*Exemption or Waiver Report*” as shown in Annex 4 of the “*Guidelines for Supervision and Management in Ship Atmospheric-pollutant Emission Control Area*”):

1.8.1 Use of the compliant fuel oil after modification of the ship structure and equipment which cannot be completed within one year since implementation of the “*Scheme*”;

1.8.2 Failure to obtain the compliant fuel oil by all means;

1.8.3 Failure to comply with the “*Scheme*” in the specified period due to damage or fault of the relevant equipment; or

1.8.4 Failure to comply with the Scheme for the purpose of securing the safety of a ship or saving life in the specified period.

2. Specifications of the Supervision and Management in Ship Emission Control Area

2.1 Maritime administration at all levels shall conduct the supervision and management in ship emission control area according to the “*Scheme*”, “*Guidelines for Supervision and Management in Ship Atmospheric-pollutant Emission Control Area*” (see the Attachment) and relevant laws and regulations.

All relevant maritime administration shall assist or cooperate with Yangtze River Administration of Navigational Affairs, Pearl River Administration of Navigational Affairs and Shanghai Integrated Port Management Committee Office on the ship atmospheric-emission control and management conducted under their responsibilities.

2.2 The provincial level maritime administration where coastal prefecture-level city

governments intend to set forward requirements for the control on sulfur content of the fuel oil used on sea going ships that enter into inland river waters under the jurisdiction according to requirements in the inland river control area shall report to the Bureau of Maritime Administration under Ministry of Transport of the People's Republic of China in advance.

This notice is implemented from 1 January 2019. The former *“Notice about Enhancement of the Supervision and Management in Ship Emission Control Area by Maritime Bureau of the People's Republic of China”* (No. 48 (2016) HCJ), *“Notice about Further Improvement of the Supervision and Management on Ship Fuel Oil Quality by Maritime Bureau of the People's Republic of China”* (No. 11 (2016) HWF), and *“Notice about Specifications of, Supervision and Management in the Ship Atmospheric-pollution Prevention by the Bureau of Maritime Affairs under Ministry of Transport of the People's Republic of China”* (No. 454 (2016) HWF) are invalid.

Attachment: Guidelines for Supervision and Management in Ship Atmospheric-pollutant Emission Control Area

By the Bureau of Maritime Affairs under Ministry of Transport of the People's Republic of China
On 29 December 2018

Appendix

Guidelines for Supervision and Management in Ship Atmospheric-pollutant Emission Control Area

1. General

1.1 Purpose

In order to implement the “*Implementation Scheme of the Domestic Emission Control Areas for Atmospheric Pollution from Vessels*” issued by Ministry of Transport of the People’s Republic of China (referred to as the “*Scheme*” hereinafter) and for reference to supervision and management the ship atmospheric-pollutant emission control conducted by maritime administration, these guidelines are established herein.

1.2 Basis

These guidelines are prepared in accordance with laws, administrative statutes and regulations such as “*Law of the People’s Republic of China on Prevention and Control of Atmospheric Pollution*”, “*Maritime Environment Management Regulations on the Prevention and Control of Ship Pollution*”, “*Maritime Environment Management Specifications on the Prevention and Control of Ship and Related Operation Pollutions in the People’s Republic of China*” and “*Inland River Waters Environment Management Specifications on the Prevention and Control of Ship Pollution*” as well as standards and specifications such as the “*Implementation Scheme in Ship Atmospheric-pollutant Emission Control Area*”, “*Marine Fuel Oil*”, “*Technical Code of Statutory Survey on Ships and Maritime Facilities*”, and “*Technical Regulation for Statutory Survey of River-sea Ships along a Specific Voyage Course (2018)*”.

1.3 Applicability

These guidelines are applicable to ships that voyage, berth and operate in the emission control area except military vessels, sport boats and fishing ships.

1.4 Terms and Definitions

1.4.1 “River-sea intermodal ships” are referred to those defined in “*Technical Regulation for Statutory Survey of River-sea Ships along a Specific Voyage Course (2018)*”.

1.4.2 “Existing ships in 5.11 of the Scheme” are referred to Chinese flag and foreign flag ships in operation before 1 July 2019 including public service vessels.

1.4.3 “Liquid cargo ships” are referred to ships that have been built or modified to carry the flammable liquid cargo in bulk, which include tankers, ships carrying chemicals in bulk and ships carrying liquefied gases in bulk.

1.4.4 “Cruise ships” are referred to high-class passenger ships that voyage along fixed lines for the tourism, which include new and existing Chinese flag and foreign flag cruise ships.

1.4.5 “Berthing mentioned in 5.11, 5.12 and 5.13 of the Scheme” is referred to the time period from stable mooring of a ship at its berth to release of its mooring from the berth, which does not include ship anchoring and mooring with buoys. “Stable mooring” is referred to the condition that all ship ropes have been tied and secured. “Release of its mooring from the berth” is referred to the condition that all ship ropes have been released.

1.4.6 “The exhaust gas post-treatment equipment” is referred to a ship facility that obtains the atmospheric pollution emission reduction better than or equivalent to what specified in the Implementation “*Scheme*” by decreasing Sulfur Oxide, Nitrogen Oxide and particulate matter of

the ship exhaust with technical methods such as desulfurization and de-nitration.

1.4.7 “The test unit with national qualification” is referred to a laboratory recognized by the quality technical supervision department at or above provincial level or the Chinese National Accreditation Service for Conformity Assessment.

2. Inspection of the Ship Fuel Oil Usage and Supply

2.1 Inspection of the Fuel Oil Used on Ships

2.1.1 Monitoring of the Exhaust Gas from Ship

Maritime administration can deploy the ship exhaust gas monitoring device in combination with their jurisdiction features to carry out preliminary inspection of ships involved in use of the fuel oil with sulfur content over the criteria and emission of Nitrogen Oxides over the criteria through the ship exhaust gas monitoring and systems such as AIS. The information about suspicious ships that are not berthed in the jurisdiction area is reported timely to the maritime administration with jurisdiction over the place of berthing. The Bureau of Maritime administration under Ministry of Transport of the People’s Republic of China will gradually promote incorporation of the ship atmospheric-pollutant monitoring into the Dangerous Cargo Control and Pollution Prevention information management system.

Maritime administration at all levels treat the ships recorded for illegal emission and involved in use of the fuel oil with sulfur content over the criteria and emission of Nitrogen Oxides over the criteria that are identified through exhaust gas monitoring as key inspection objects.

2.1.2 Document Inspection

Materials that include the engine logbook, bunker delivery note and fuel consumption information report are checked in combination with the supervision and safety inspection at site by a maritime administration .The inspection is detailed as below:

2.1.2.1 Engine Logbook: Inspection whether the record about start and end time of the ship fuel oil changeover, longitude and latitude of ship position, sulfur content of the fuel oil used before and after changeover, remaining fuel oil in tanks, usage of the low-sulfur fuel oil operators and so on are complete and normative, and verification of the ship position upon completion of the fuel oil changeover for compliance with the “Scheme”.

2.1.2.2 Bunker Delivery Note: Checking whether the bunker delivery note is held and kept for 3 years as specified and whether the record in the bunker delivery note comply with the requirement, especially, it shall focus on inspection of safety and environmental protection indices for the fuel oil including sulfur content, flash point, acidity, condensation point, water content and mechanical impurities and so on for compliance with specified lower limits.

2.1.2.3 Fuel Oil Changeover Procedures: Checking whether the fuel oil changeover procedures are held and incorporated into the marine safety management system (for the ships apply for the system) or other operation procedures (for the ships do not apply for the system) and whether the fuel oil changeover operation record is normative and complete.

2.1.2.4 Receipt and Investigation of the Ship’s Deficiency Information Arising from Use of the Non-compliance Fuel Oil: The information of the ship and company, voyage plan, time and place of the access to and out from control area, time and place of the deficiency occurrence, deficiency details, name and address of the fuel oil supplier, time and place of bunkering and information on the bunker delivery note at least shall be reported to the maritime administration in the place of fault occurrence within 24 hours.

The maritime administration conducts timely investigation of ships with the deficiency information report to verify whether machine and equipment deficiencies arise from use of the non-compliance fuel.

2.1.3 Fuel Oil Inspection

2.1.3.1 Inspection of the Fuel Oil Sample

The sample kept on board is checked to verify whether it has been sealed and signed by the supplier representative and captain or officer responsible for fuel oil bunkering after bunkering operation. It is checked to verify whether the sample on board is kept at least 12 months after the fuel oil is almost used up.

2.1.3.2 Inspection of the Fuel Oil Pipe System

The layout and diagram of ship fuel oil pipe system are checked to verify whether they are in compliance with specifications, whether the fuel oil pipe system is consistent with the diagram of fuel oil pipe system, whether valves in the fuel oil pipe system are at the position of low or high sulfur fuel oil and whether the ship owner has actually made the fuel oil changeover operation.

2.1.3.3 Estimation of the Marine Fuel Oil Usage

The low-sulfur fuel oil consumption on board after entering into the emission control area can be estimated theoretically from the formula: $AX + BY + CZ$ (in ton) where A represents fuel oil consumption of the main engine in ton/nautical mile, B represents fuel oil consumption of the auxiliary engine in ton/hour, C represents fuel oil consumption of the boiler in ton/hour, X represents travel distance in the control area in nautical mile, Y represents operating time of the auxiliary engine in the control area in hour, and Z represents operating time of the ship's fuel oil boiler in the control area in hour. The above parameters can be found in records such as "*Voyage Logbook*" and "*Engine Logbook*".

Amounts of the low-sulfur fuel oil loaded on board and the low-sulfur fuel oil left actually on board are checked for comparison between the above theoretical calculation value and the amount of low-sulfur fuel oil left actually on ships to judge preliminarily whether completion of the changeover to low-sulfur fuel oil (that shall be used on all fuel oil facilities including main engine, auxiliary engine, boiler and so on) is as specified.

2.1.3.4 Inspection of the Fuel Oil Temperature and Viscosity

Data that include the fuel oil temperature and viscosity at inlet of the main engine, auxiliary engine and boiler together with their historical trends (if available) and the warning record are checked to further verify whether the low-sulfur fuel oil is used on board.

2.1.3.5 Inspection of the Fuel Oil Loaded on Ships

It is checked through viewing the bunker delivery note, oil record books and storage in the fuel oil tanks to verify whether the ship without alternatives such as Sulfur Oxide and particle pollution control devices that enters into the emission control area is loaded only with the fuel oil that shall be used on it as specified since 1 March 2020. The ship that voyages inside and outside different control areas is allowed for bunkering the fuel oil as required in use inside and outside relevant control areas.

2.1.3.6 Test of the Fuel Oil Sample

A maritime administration conducts the ship fuel oil spot-check on ships that are ineligible in the document inspection, recorded for violation of regulation or suspicious in violation of regulation through the inspection. The ship fuel oil spot-check can be also made by the maritime administration on ships that are eligible in the document inspection, not recorded for violation of

regulation and clear from the suspicion in violation of regulation.

(1) Quick Test of the Fuel Oil

A maritime administration can preliminarily test sulfur content of the fuel oil used on board by application of the quick test equipment. According to the test result, it is judged preliminarily to determine whether sulfur content of the fuel oil is over the criteria (see Annex 1). It is suggested for testing at a laboratory upon the preliminary test result over 10% than the criteria, and the ship owner can be requested to issue the “*Trust Deed*” (see Annex 2).

The section of “fuel oil sampling” is referred to for sampling involved in use of the quick test equipment.

(2) Fuel Oil Sampling

Fuel oil sampling is made from the fuel oil service tank or the downstream pipeline to fuel oil service tank and as close as possible to the combustion system at the condition of safety assurance (such as fuel oil sampling point set on board, final filter before fuel oil entering into machines or scavenging valve closest to the fuel oil application device). Sampling can be made together by the law enforcement officer and ship crew or entrusted to a third-party through reference to “*Guideline for onboard sampling of fuel oil*” by the International Maritime Organization. Minimum three fuel oil samples that contain at least 400ml of the fuel oil and respectively delivered to the ship owner, submitted for testing and kept by a maritime administration are taken at the same sampling point. The fuel oil sample label (see Annex 3) that has been filled out, seal-numbered and signed by the ship owner representative and two law enforcement officers is adhered to the bottle.

(3) Sample Submission for Testing

The law enforcement officer keeps the sample in a safe place with low temperature and shading from the sunlight and delivers the sample that has been taken timely to a fuel oil test authority with corresponding qualification, who will then conduct sample testing in accordance with validation procedures specified in Appendix VI in Annex VI of “International Convention for the Prevention of Pollution from Ships” as well as test methods identified in effective existing national standards. Sulfur content of the fuel oil product shall be given in the test report. It is possible to make the spot check the safety and environmental protection indices including viscosity, flash point, acid value, flow point, water content, ash content and “aluminum + silicon” dependent on actual conditions and comparison with those specified in national marine fuel oil and diesel oil standards.

2.1.3.7 Standards for the Marine Fuel Oil

The principle of using fuel oil or diesel oil suitability is insisted upon matching between the engine and the fuel. The fuel oil as required for inland river ships in the standard of “*Marine Fuel Oil*” shall be used on large inland river ships and river-sea intermodal ships in the inland river control area. The diesel oil in compliance with the standard of “*Vehicle Diesel Oil*” shall be used on other inland river ships.

The marine fuel oil with sulfur content not more than 0.50% m/m shall be used on river-sea ships in the coastal control area.

2.1.4 Result Verification

It is verified by maritime law enforcement officer after receipt of the test report whether the fuel oil used on ships is in compliance with the “*Scheme*” and relevant conventions and standards.

2.1.5 Result Treatment

2.1.5.1 Ships on which the fuel oil not in compliance with standards or requirements is used or loaded are treated in accordance with laws, administrative statutes and regulations such as “*Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution*”, “*Maritime Environment Management Regulations on the Prevention and Control of Ship Pollution*”, “*Maritime Environment Management Specifications on the Prevention and Control of Ship and Related Operation Pollutions in the People's Republic of China*” and Inland “*River Waters Environment Management Specifications on the Prevention and Control of Ship Pollution in the People's Republic of China*” as well as relevant international conventions that our country has ratified. The local maritime administration can notify the maritime administration at the next port of the ship leaving from the previous port for investigation assistance.

2.1.5.2 The ship on which the bunker delivery note and fuel oil sample are not kept as specified will be punished in accordance with paragraph 62 of “*Maritime Environment Management Regulations on the Prevention and Control of Ship Pollution*”.

2.2 Inspection of Ship Fuel Oil Suppliers

2.2.1 Inspection Contents

The fuel oil supplier is checked to verify whether it has provided the ship with bunker delivery note and fuel oil sample; whether the information about name of the fuel oil receipt ship, ship identification number or the IMO number, time and place of operations, name, address and contacts of the fuel oil supplier, fuel oil type, fuel oil amount, fuel oil density and sulfur content of the fuel oil is included in the bunker delivery note; whether the bunker delivery note has been kept for 3 years; whether the fuel oil sample has been kept well for 1 year; whether the test report for each fuel oil batch is held; and whether the fuel oil that has been tested and blended or mixed with other fuels is retested.

2.2.2 Result Treatment

(1) The fuel oil supplier who does not truthfully fill out the bunker delivery note or fails to provide the ship with bunker delivery note and fuel oil sample as specified, or failure to keep bunker delivery note and fuel oil sample as specified is punished in accordance with paragraph 62 of “*Maritime Environment Management Regulations on the Prevention and Control of Ship Pollution*”.

(2) The fuel oil supplier who fails to operate for bunkering in accordance with relevant safety and pollution prevention and control specifications or who supplies the ship fuel oil over the criteria is required by maritime administration to make remedies as specified.

2.2.3 Joint Supervision and Management of the Supplied Fuel Oil Quality

The institution for joint supervision and management of marine fuel oil circulation links is established together by the maritime administration and market supervision authority (that covers quality inspection, industry and commerce) to organize specific administration activities, conduct the joint enforcement or set up the joint supervision and management information report mechanism for the enforcement information exchange.

3. Inspection of Nitrogen Oxide Controls on Ships

3.1 Document Inspection

The certificates and documents that include “*Air Pollution Prevention Certificate*”, “*Engine Air Pollution Prevention Certificate*”, Engine Product Certificate and “*Engine Logbook*” are checked in combination with the supervision and safety inspection at site by the maritime administration. The inspection is detailed as below:

3.1.1 Inspection of the ship type, date of the ship construction, major conversion of engine to verify compliance of the ship with Nitrogen Oxide emission standards (see Annex 1), and inspection of relevant certificates and documents such as “*Air Pollution Prevention Certificate*” to verify compliance of the level of Nitrogen Oxide emission from engines (except engines for emergency use) with standards that the ship shall follow.

3.1.2 Inspection of the “*Engine Logbook*” together with technical files and parameter records for the ship engine to verify whether actual parameters of engine are consistent with those parameters listed in technical files, whether replacement parts in parameter records are consistent with those parts listed in technical files, and whether the engine has been modified to the extent of impact on the Nitrogen Oxide emission level.

3.1.3 The information of displacement of per cylinder “A ship having diesel engines with a per cylinder displacement at or above 30 liters” as mentioned in sub-paragraph 5.2.8 of the “*Scheme*” can be found from the engine nameplate and bed test documents, where the displacement of per cylinder can be calculated as per the formula of $\pi D^2 \times S / 4$ with variables D and S representing respectively the cylinder diameter and stroke that can be found in the engine nameplate or technical files; and “a ship having diesel engines with a per cylinder displacement at or above 30 liters” is to be treated as “a ship having diesel engine with rated power not less than 5,000kw” in the case of failure to obtain the above parameters.

3.2 Inspection at Site

3.2.1 Inspection of the number of engines and the information on nameplate to verify whether the actual layout of ship engines is consistent with what recorded in “*Air Pollution Prevention Certificate*”.

3.2.2 Inquiry with the ship crew and inspection at site to verify whether engines for emergency use on board are used in non-emergency conditions.

3.3 Result Treatment

The failure to comply with requirements for control of Nitrogen Oxides on ships is treated in accordance with “*Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*” and international conventions that our country has ratified, depending on the extent of violation.

4. Inspection of Volatile Organic Compounds on Ships

4.1 Document Inspection

The certificates and documents that include “*Volatile Organic Compound Control Plan*”, “*Air Pollution Prevention Certificate*”, “*Voyage Logbook*” and “*Engine Logbook*” on ships are checked in combination with the supervision and safety inspection at site by the maritime administration. The inspection is detailed as below:

4.1.1 Verification of the ship type, date of ship construction and flag administration of the ship to determine whether requirements for control of the volatile organic compound emission are applicable to the ship.

4.1.2 Inspection of the ship to which paragraph 16 of the “*Scheme*” applies to verify whether it is provided with a vapor emission collection system in compliance with ship inspection specifications and vapor emission collection operation procedures and whether the use of vapor emission collection system is recorded in “*Voyage Logbook*”, “*Engine Logbook*” or other relevant record books.

4.2 Result Treatment

For ships without vapor emission collection system in compliance with ship inspection specifications, to which paragraph 16 of the “Scheme” applies, it is treated in accordance with “Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution” and international conventions that our country has ratified depending on the extent of violation.

5. Inspection of Shore Power and Alternatives

5.1 Document Inspection

Ship documents are checked in combination with the supervision and safety inspection at site by the maritime administration. The inspection is detailed as below:

5.1.1 Inspection of Shore Power

5.1.1.1 Inspection of the following ships to verify whether they are provided with onboard devices of shore power system: Chinese public service vessels, inland river ships (except liquid cargo ships) and river-sea intermodal ships constructed on or after 1 January 2019; and Chinese flag container ships, cruise ships, ro-ro passenger ships, passenger ships at and above 3,000 tonnage and dry cargo ships at and above 50,000 tonnage (referred to deadweight tons) that voyage along domestic coasts. The above construction date of ship is referred to the time of ship keel laying or the period of ship construction.

5.1.1.2 Inspection of existing ships (except liquid cargo ships) provided with onboard devices of shore power system and without other equivalents that berthing for more than 3 hours at berths capable of shore power supply in the coastal control area or more than 2 hours at similarities in the inland river control area to verify whether the shore power is used on these ships as specified, which will begin from 1 July 2019; and inspection of cruise ships without other equivalents that berthing for more than 3 hours at berths capable of shore power supply to verify whether the shore power is used on them as specified, which will begin from 1 January 2021.

5.1.1.3 Inspection of the Chinese public service vessels and inland river ships (except liquid cargo ships) and the Chinese flag container ships, ro-ro passenger ships, passenger ships at and above the total 3,000 tonnage and dry cargo ships at and above 50,000 tonnage (referred to deadweight tons) voyaging along domestic coasts that are propelled by diesel engines at output power more than 130kw and not in compliance with required Nitrogen Oxide emission limits at the Tier II of “*International Convention for the Prevention of Pollution from Ships*” without other alternatives and berthing for more than 3 hours at berths capable of the shore power supply in the coastal control area or more than 2 hours at similarities in the inland river control area to verify whether onboard devices of shore power system are installed and the shore power is used on them as specified, which will begin from 1 January, 2022.

5.1.1.4 Inspection of ships for the shore power usage in compliance with relevant safe operation procedures; inspection of the ship “*Engine Logbook*” for complete and normative recording of the start and end time of shore power application; and inspection of the start and end time of shore power application for compliance with the “Scheme”.

5.1.2 Inspection of Clean or New Energy Resource Applications

For ships with clean or new energy resource applications, it is to be checked to verify whether clean energy resource applications on ships are endorsed in “*Air Pollution Prevention Certificate*”. Ships propelled by the dual fuel engine are to be checked for complete and normative recording of the fuel oil changeover time, longitude and latitude of the ship at the time of fuel oil changeover and usage of the clean and new energy resources and the fuel oil and for compliance of the ship

position at the time of fuel oil changeover with the “Scheme”.

Ships propelled by the dual fuel engine are to be checked to verify whether they are provided with the maintenance procedures and information related to gas devices, operation procedures that contain the fuel oil operation manual for safe operation of bunkering, storage and transportation systems by trained operators and appropriate emergency response procedures.

5.1.3 Inspection of the Exhaust Gas Post-treatment Equipment Application

For ships with exhaust gas post-treatment equipment, it is to be checked to verify whether the product certificate for exhaust gas post-treatment equipment is held and endorsed in Air Pollution Prevention Certificate. The ship “Engine Logbook” is checked for complete and normative recording of start and end time of the exhaust gas post-treatment equipment application and longitude and latitude of the ship at start and end of the equipment application as well as for compliance of the ship position at start and end of the equipment application with the “Scheme”.

5.1.3.1 Inspection of the Exhaust Gas Cleaning System Application

For ships with exhaust gas cleaning system, it is to be checked to verify whether the “Sulfur Oxide Emission Compliance Certificate”, technical manual of the exhaust gas cleaning system, onboard monitoring manual and records of the exhaust gas cleaning system are held. The exhaust gas cleaning system approved according with scheme B is checked to verify whether the continuous exhaust gas monitoring system is installed. The residual of wash water from the ship exhaust gas cleaning system shall be managed as per operational wastes. Records of the ship exhaust gas cleaning system and garbage records are checked to verify whether the residual of wash water from the exhaust gas cleaning system is received by the ship pollutant receiver or discharged to the onshore receipt facility and whether the residual of wash water is discharged into a water area or incineration on board.

5.1.3.2 Inspection of the Selective Catalytic Reduction System Application

For ships with selective catalytic reduction system, it is to be checked to verify whether technical files of the selective catalytic reduction system and material safety data sheet (MSDS) of the catalyst are held, whether measures to reduce the catalyst leakage are established and whether the amount, ingredients and concentration of the catalyst loaded on ships for each time are recorded. The catalyst supply in technical files and the operating time of selective catalytic reduction system in relevant records are checked to estimate the catalyst consumption. The estimated consumption is compared with the amount of ship loading to verify whether the selective catalytic reduction system is operated on ships as specified. The selective catalytic reduction system of feedback control or the selective catalytic reduction system of feed forward control for which parameters such as the catalyst lifetime in normal conditions are not available is checked to verify whether the NO_x monitoring device is installed at the system outlet. The ship with the selective catalytic reduction system of feed forward control for which the NO_x monitoring device is not installed at the system outlet is checked to verify whether data such as the catalyst lifetime in normal conditions and description of the catalyst maintenance are available.

5.2 Inspection at Site

The maritime administration conducts the inspection at site on ships that are ineligible in the document inspection, recorded for violation of regulation or suspicious in violation of regulation where the shore power and clean and new energy resources are used and the exhaust gas post-treatment equipment is installed to verify whether the required emission control is achieved.

5.2.1 Inspection of the Exhaust Gas Cleaning System Application

For ships exhaust gas cleaning system approved by scheme B, it is to be checked for operation of the continuous exhaust gas monitoring system, keeping of the monitoring data for 18 months as specified, compliance of the recorded SO₂/CO₂ ratio with “2015 Guidelines for Exhaust Gas Cleaning Systems” (Resolution MEPC.259 (68)) and verification of compliance of the exhaust gas emission from exhaust gas cleaning system.

Ships are to be checked for installation and operation of the wash water continuous monitoring system, keeping of the monitoring data for 18 months as specified, compliance of the recorded parameters such as PH and PAH data and turbidity of the wash water with “2015 Guidelines for Exhaust Gas Cleaning Systems”. The wash water can be further sampled and tested to verify whether its discharge is in compliance with “2015 Guidelines for Exhaust Gas Cleaning Systems”. The ship is checked to verify whether the wash water from the open loop exhaust cleaning system is discharged into inland river and port water of coastal control areas and Bohai Sea.

5.2.2 Inspection of the Selective Catalytic Reduction System Application

For ships with selective catalytic reduction system, it is to be checked to verify whether its electrical control system is capable of automatically recording certain latest data of the selective catalytic reduction system, storing abnormal conditions such as warning and fault in operation and keeping of the recorded data for at least 18 months.

The NO_x monitoring device at outlet of the selective catalytic reduction system is checked for normal operation. The detected NO_x concentration is compared with the NO_x concentration at the corresponding mode point to initial issuance of Engine Air Pollution Prevention Certificate to verify whether the selective catalytic reduction system is sufficiently capable of the NO_x reduction in compliance with “2017 Guideline Addressing Additional Aspects to the NO_x Technical Code 2008 With Regard to Particular Requirements Related to Marine Diesel Engines Fitted With Selective Catalytic Reduction (SCR) System” (Resolution MEPC. 291(71)).

5.3 Result Treatment

For ships with alternatives that are not in compliance with the “Scheme”, it is treated in accordance with “Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution” and international conventions that our country has ratified, depending on the extent of violation.

6. Submission and Treatment of the Exemption or Waiver

6.1 Submission of the Exemption or Waiver

The ship owner who submits the exemption or waiver shall provide corresponding evidences to the local maritime administration. The evidences and related certificates and documents including ship conversion plan and time of its completion that are issued by the ship inspection authority shall be provided for use of the required fuel oil after structure or equipment modification on board. The following information with regard to the ship on which the required fuel oil is not available shall be reported to the maritime administration at destination port at least 24 hours prior to arrival at the port (or before start of the ship voyage insufficient to 24 hours): basic description of the ship and company, voyage plan, time and place of the access to and out from the control area, and evidences to attempt purchase of the specified fuel, endeavor in finding alternative fuel oil sources and plan acquisition of the specified fuel.

6.2 Treatment of the Exemption or waiver

The maritime administration conducts timely verification of the ship with regard to submission of

the exemption or waiver. Implementation of relevant control requirements in the “*Scheme*” can be withheld temporarily when the situation is truthful. The exemption or waiver is not granted upon finding that the exemption or waiver conditions are no more available or the materials provided are fake, and it is treated as specified.

7. Information Reporting

A maritime administration who receives the information about machine faults arising from use of the fuel oil not as specified and failure to obtain the required fuel oil information shall report the situation received, investigated or verified to the Bureau of Maritime Affairs under Ministry of Transport of the People’s Republic of China on a quarterly basis through the maritime administration or local provincial maritime administration department to which it is directly affiliated.

Annex 1

Requirements to Control Sulfur Content of the Ship Fuel

Ship type		Emission control area			Non-emission control area	
		Coastal control area		Inland river control area	Coastal waters	Inland river waters
		Hainan waters	Other waters			
Sea going ships		$\leq 0.50\%$ since 1 January 2019; $\leq 0.10\%$ since 1 January 2022	$\leq 0.50\%$ since 1 January 2019; $\leq 0.10\%$ since 1 January 2025 (to be estimated)	$\leq 0.50\%$ since 1 January 2019; $\leq 0.10\%$ since 1 January 2020	$\leq 3.50\%$ since 1 January 2012; $\leq 0.50\%$ since 1 January 2020	$\leq 3.50\%$ since 1 January 2012; $\leq 0.50\%$ since 1 January 2020
Inland river ships	Large inland river ships	--	--	Use of the fuel oil in compliance with the latest revision of Marine Fuel Oil Standard since 1 January 2019	--	Use of the fuel oil in compliance with the latest revision of Marine Fuel Oil Standard since 1 January 2019
	Other inland river ships	--	--	Use of the diesel oil in compliance with national standards since 1 January 2019	--	Use of the diesel oil in compliance with national standards
River-sea Intermodal ships		$\leq 0.50\%$ since 1 January 2019	$\leq 0.50\%$ since 1 January 2019	Use of the fuel oil in compliance with the latest revision of Marine Fuel oil Standard since 1 January 2019	$\leq 3.50\%$ since 1 January 2012; $\leq 0.50\%$ since 1 January 2020	Use of the fuel oil in compliance with the latest revision of Ship Fuel oil Standard since 1 January 2019

Requirements to Control Nitrogen Oxides on Ships

Ship type		Emission control area			Non-emission control area
		Coastal control area		Inland river control area	
		Hainan waters	Other waters		
Ships engaged in international voyage		Power output of more than 130kw on and after 1 January 2000 and ≤ limits at the international convention Tier I; Power above 130kw on and after 1 January 2011 and ≤ limits at the international convention Tier II			
Ships engaged in domestic voyage	Chinese Flag Ships	Power output of more than 130kw on and after 1 March 2015 and ≤ limits at the international convention Tier II ; Displacement at and above 30L on and after 1 January 2022 and ≤ limits at the international convention Tier III;	Power output of more than 130kw on and after 1 March 2015 and ≤ limits at the international convention Tier II; Displacement at and above 30L on and after 1 January 2025 and ≤ limits at the international convention Tier III (to be estimated);	Power output of more than 130kw on and after 1 March 2015 and ≤ limits at the international convention Tier II; Displacement at and above 30L on and after 1 January 2022 and ≤ limits at the international convention Tier III;	Power output of more than 130kw on and after 1 March 2015 and ≤ limits at the international convention Tier II
	Foreign Flag Ships	--			

Annex 2

Trust Deed

Re: _____

TO: _____

I hereby entrust you to settle down the qualification test of fuel oil used on board with _____
Maritime Safety Administration on behalf of me, if any problems, please hand them for my ship's
company.

The name and the phone number of the Designated person:

Ship's Name:

Captain Signature:

Date:

Annex 3

_____ MSA FUEL SAMPLE IDENTIFICATION LABEL

Sample No.		Date and time of sampling	
Sample description	International ship	Coastal ship	Inland river ship
Specification and grade	Diesel oil RMG 180 RMK 380 RMK 500 Others (to be specified):		
Name of the sampled ship		Sampling location	
Enforcement officers (two)		Signature by the ship owner representative	
Seal No.			

Annex 4

Exemption or Waiver Report Sheet

Ship name:	Flag Administration/port of ship registry
Gross tonnage:	IMO number/ship identification number:
Ship type:	Data of ship construction
Previous port:	Next port:
Owner:	Operator:
Wharf:	Date and time of berthing
Agent company:	
Reasons:	
List of evidences:	
Date: (Stamped)	

Copy for: Transport halls, bureaus and committees in all provinces, municipalities and cities directly under the central government; Shanghai Integrated Port Management Committee Office; Yangtze River Administration of Navigational Affairs; Pearl River Administration of Navigational Affairs; and China Classification Society

Printed and issued by: Bureau of Maritime Affairs under Ministry of Transport of the People's Republic of China

On: 29 December 2018

交通运输部海事局文件

海危防〔2018〕555 号

交通运输部海事局关于规范实施船舶大气 污染物排放控制区监督管理工作的通知

各直属海事局：

为深入贯彻落实《船舶大气污染物排放控制区实施方案》（交海发〔2018〕168 号，以下简称《方案》）要求，确保船舶大气污染物排放控制区各项政策要求有效实施，现就进一步明确船舶排放控制区有关要求和规范监督管理工作有关事项通知如下：

一、进一步明确排放控制区有关要求

（一）船舶在排放控制区内使用的燃油应当符合《方案》的要求。在船用燃料油、柴油国家标准修订实施之前，内河船舶和

进入内河控制区的江海直达船舶使用的燃油应当符合现行标准。

（二）需要转换低硫燃油的船舶，应当制定并随船配备燃油转换程序。船舶应当在进入排放控制区前完成低硫燃油转换，确保在进入排放控制区时已经在使用低硫燃油；船舶换用高硫燃油的，应当在离开排放控制区后开始转换；船舶应当将换油起止时间、船位经纬度、转换前后所使用燃油的硫含量以及燃油舱存量、低硫燃油使用量等信息记录在《轮机日志》等记录簿中。

（三）船舶氮氧化物排放控制应当符合《国际防止船舶造成污染公约》《船舶与海上设施法定检验技术规则》和《方案》的要求。船舶发动机发生重大改装影响氮氧化物排放水平的，应当采取措施达到与改装前同等的排放水平并申请船舶检验机构的检验。

（四）船舶使用岸电的，应当按照有关安全操作规程操作，并将岸电使用起止时间、操作人员等信息记录在《轮机日志》或其他相关记录簿中。

（五）船舶使用液化天然气等清洁能源、新能源及其他替代措施的，不得影响船舶的航行、停泊和作业安全，同时应当符合相关安全操作规程，并将使用情况记录在《轮机日志》或者其他相关记录簿中。双燃料动力船舶应当将各种燃料的使用量、换用燃料的时间、船位经纬度、操作人员等信息记录在《轮机日志》

或者其他相关记录簿中。

（六）船舶使用尾气后处理装置的，应当按要求持有船舶检验机构签发的尾气后处理装置产品证书，保持装置运行良好。使用国际海事组织《2015 废气清洗系统指南》（MEPC.259(68)决议）规定的方案 B 型废气清洗系统的船舶应当安装和使用废气连续监测系统；使用闭环控制选择性催化还原系统或者使用不能提供常用工况下催化剂寿命等参数的开环控制选择性催化还原系统的船舶，应当安装和使用氮氧化物监测设备。船舶应当将使用尾气后处理装置的起止时间、船位经纬度、操作人员等信息记录在《轮机日志》或其他相关记录簿中。

（七）船舶使用尾气后处理装置产生的水污染物的排放和处理应当符合相关规定的要求。禁止在内河控制区、沿海控制区内的港口水域和渤海水域排放开式废气清洗系统洗涤水，其它沿海控制区水域内开式废气清洗系统洗涤水的禁排要求将适时公布实施。禁止将废气清洗系统洗涤水残渣排放入水或进行船上焚烧，船舶应当如实记录废气清洗系统洗涤水残渣的储存和处理情况。

（八）具有以下情形之一，船舶使用不符合《方案》要求燃油的，应当向当地海事管理机构提出豁免或免责（《豁免或免责情形报告表》详见《船舶大气污染物排放控制区监督管理指南》

附录 4)：

1. 需要对船舶结构和设备进行改造后才能使用符合要求燃油的，但此改造应在《方案》实施后一年内完成；
2. 已做出一切应尽的努力，仍无法获得符合要求的燃油的；
3. 因相关设备损坏、故障而无法在规定期间符合《方案》要求的；
4. 为保障船舶安全或实施海上人命救助，而无法在规定期间符合《方案》要求的。

二、规范船舶排放控制区监督管理工作

（一）各级海事管理机构应当按照有关法律法规规章和《方案》的要求，参照《船舶大气污染物排放控制区监督管理指南》（详见附件）开展船舶排放控制区的监督管理工作。

对于长江航务管理局、珠江航务管理局、上海组合港管委会办公室依职责组织开展的船舶大气排放控制管理工作，各相关海事管理机构应当给予支持配合。

（二）沿海地级市拟在本行政管辖区域内的内河通航水域，参照内河控制区的要求，对海船进入本水域燃油硫含量提出控制要求的，当地省级海事管理部门应当提前报交通运输部海事局。

本通知自 2019 年 1 月 1 日起实施。原《中华人民共和国海事局关于加强船舶排放控制区监督管理工作的通知》（海船检

〔2016〕48号）、《中华人民共和国海事局关于进一步加强船舶燃油质量监督管理工作的通知》（海危防〔2016〕11号）和《交通运输部海事局关于规范船舶大气污染防治监督管理工作的通知》（海危防〔2016〕454号）同时废止。

附件：船舶大气污染物排放控制区监督管理指南



附件

船舶大气污染物排放控制区监督管理指南

1 总则

1.1 目的

为规范实施交通运输部印发的《船舶大气污染物排放控制区实施方案》（以下简称《方案》），为海事管理机构开展船舶大气污染物排放控制监督管理工作提供参考，制定本指南。

1.2 依据

本指南依据《中华人民共和国大气污染防治法》《防治船舶污染海洋环境管理条例》《中华人民共和国船舶及其有关作业活动污染海洋环境防治管理规定》《防治船舶污染内河水域环境管理规定》等法律、行政法规、规章和《船舶大气污染物排放控制区实施方案》，以及《船用燃料油》《船舶与海上设施法定检验技术规则》《特定航线江海直达船舶法定检验技术规则（2018）》等标准规范编制。

1.3 适用对象

本指南适用于在排放控制区内航行、停泊、作业的船舶，军用船舶、体育运动船艇和渔业船舶除外。

1.4 术语和定义

1.4.1 “江海直达船舶”，系指符合《特定航线江海直达船舶法定检验技术规则（2018）》定义的船舶。

1.4.2 《方案》第五部分第 11 条中的“现有船舶”，系指 2019 年 7 月 1 日之前已在营运的中国籍和外国籍船舶，包括公务船舶。

1.4.3 “液货船”，系指建造成或改装成适合于载运散装易燃液体货物的船舶，包括油船、化学品船和液化气船。

1.4.4 “邮轮”，系指以旅游为目的、定线航行的高端客船，包括中国籍和外国籍邮轮、新造和现有邮轮。

1.4.5 《方案》第五部分第 11、第 12 和第 13 条中的“停泊”，系指船舶开始稳固的系泊于某泊位的时刻至解开与其泊位系缚的时刻之间的时间段，不包括船舶锚泊与浮筒系泊；“稳固的系泊”系指所有船舶缆绳都系固完毕的状态；“解开与其泊位系缚”系指所有船舶缆绳解开的状态。

1.4.6 “尾气后处理装置”，系指通过脱硫、脱硝等技术手段，降低船舶尾气中的硫氧化物、氮氧化物和颗粒物含量，使船舶取得与实施《方案》规定的相同或更好的大气污染减排效果的船用设备。

1.4.7 “具备国家规定资质的检测单位”，系指具有经过省级以上质量技术监督部门认定或中国合格评定国家认可委员会认可

的实验室。

2 船舶燃油使用和供给的检查

2.1 船舶使用燃油的检查

2.1.1 船舶尾气监测

海事管理机构可以结合辖区特点，部署船舶尾气监测设备，通过船舶尾气监测并结合 AIS 等系统初步筛查涉嫌使用硫含量超标燃油和氮氧化物排放超标的船舶。嫌疑船舶不靠泊本辖区的，及时将相关信息通报拟靠泊地的海事管理机构。部海事局将逐步推进船舶大气污染物监测工作纳入危防信息管理系统。

各海事管理机构将有违法排放记录的船舶、经尾气监测发现涉嫌使用硫含量超标燃油和氮氧化物排放超标的船舶作为重点检查对象。

2.1.2 文书检查

海事管理机构结合现场监督和安全检查工作，对船舶的轮机日志、燃油供受单证、燃料消耗信息报告等材料进行检查。具体检查内容如下：

2.1.2.1 轮机日志：核查船舶换油起止时间、船位经纬度、转换前后所使用燃油的硫含量以及燃油舱存量、低硫燃油使用量、操作人员等信息记录是否完整规范，核实换油完成船位是否符合《方案》要求。

2.1.2.2 燃油供受单证：核查是否持有燃油供受单证并按规定保存 3 年，单证记录的燃油是否符合要求，重点核查燃油的硫含量、闪点、酸度、凝点、水分、机械杂质等安全和环境保护指标是否符合规定的最低限值要求。

2.1.2.3 燃油转换程序：核查是否持有书面燃油转换程序，该程序是否纳入船舶安全管理体系（适用体系的船舶）或其他操作规程（不适用体系的船舶），燃油转换操作记录是否规范完整。

2.1.2.4 船舶使用不合规燃油故障信息的接收与调查：船舶因使用不合规燃油造成机器设备故障的，应当于发生故障后 24 小时内向发生地海事主管机关报告至少以下信息：船舶和公司基本信息、航次计划和进出控制区的时间和地点、发生故障的时间和地点、故障详情、所用燃油的供应商名称和地址、加油时间和地点、燃油供受单证所载信息等。

海事管理机构对报告故障信息的船舶及时进行调查，核实是否因使用不合规燃油造成机器设备故障。

2.1.3 燃油检查

2.1.3.1 燃油样品检查

核查船舶留存的样品，是否由供应商代表和船长或负责加油作业的高级船员在完成加油作业后密封并签字；核查船舶是否将样品保存至该燃油基本用尽且至少保存 12 个月。

2.1.3.2 燃油管系检查

核查船舶燃油管系布置及燃油管系图是否符合规范的要求，燃油管系与燃油管系图是否一致，燃油管系中的阀门处于低硫油还是高硫油位置，核实船方是否实际进行了换油操作。

2.1.3.3 船舶燃油使用数量估算

船舶进入排放控制区后理论上低硫燃油消耗量可通过以下公式估算： $AX+BY+CZ$ （吨），式中 A 为：船舶主机耗油率，单位为：吨/海里；B 为：副机耗油率，单位为：吨/小时；C 为：锅炉耗油率，单位为：吨/小时；X 为：船舶燃油主机在控制区内的推进距离（航行里程），单位为：海里；Y 为：船舶副机在控制区内的使用时间，单位为：小时；Z 为：船舶燃油锅炉在控制区内的使用时间，单位为：小时。以上参数可从《航海日志》、《轮机日志》等记录中查找。

核查船舶加装低硫燃油的数量和船上实际留存低硫燃油的数量。将上述理论计算值与船舶实际留存的低硫燃油数量进行比较，初步判断船舶是否按规定换用了低硫燃油（船上所有燃油设备，包括主机、副机、锅炉等均应当使用低硫燃油）。

2.1.3.4 燃油温度和粘度检查

核查主机、副机和锅炉的燃油进机温度和粘度及其历史趋势图（如有）以及报警记录等数据，进一步验证船舶是否使用了低

硫燃油。

2.1.3.5 船舶装载燃油检查

通过查看船舶燃油供受单证、油类记录簿、燃油舱存油情况，核查自 2020 年 3 月 1 日起未使用硫氧化物和颗粒物污染控制装置等替代措施的船舶进入排放控制区是否仅装载其按规定应当使用的燃油。对于在不同控制区内外均航行的船舶，允许其装载符合相关控制区内外使用要求的燃油。

2.1.3.6 燃油取样检测

对于文书检查不合格、有违规记录，或者经检查存在违规嫌疑的船舶，海事管理机构进行船舶燃油抽检；对于文书检查合格、无违规记录且无违规嫌疑的船舶，海事管理机构可进行船舶燃油抽检。

（1）燃油快速检测

海事管理机构可使用快速检测设备对船上使用的燃油硫含量进行初步检测。根据测试结果初步判断燃油硫含量是否超标（详见附录 1），初步检测结果超过标准 10% 的，建议送实验室检测，并可要求船方出具《委托书》（详见附录 2）。

使用快速检测设备过程中涉及的取样工作，参见“燃油取样”章节。

（2）燃油取样

燃油样品从燃油日用柜或者日用柜下游管路中抽取，在确保安全的前提下尽量接近燃烧系统（如船舶设置的燃油取样点、燃油进机前最后一道滤器或者离燃油使用装置最近的驱气阀等）。取样工作由执法人员和船员共同开展，也可委托第三方机构取样，可参照国际海事组织《船上燃油取样导则》进行取样。同一取样点至少取 3 份油样，每份油样含燃油至少 400 毫升，1 份交船方，1 份送检，1 份由海事管理机构留存，填写燃油样品标签、封条编号，经船方代表和两名执法人员签字后，将标签（详见附录 3）粘贴在瓶体上。

（3）样品送检

执法人员将样品封存在低温、遮光和安全的地方，并在取样后及时将样品送至具有相应资质的燃油检测单位，燃油检测单位按照《防污公约》附则 VI 中的附录 VI 规定的验证程序，以及现行有效的国家标准明确的检测方法进行样品检测。检测报告应当给出油品的硫含量，有条件的可视情抽检粘度、闪点、酸值、倾点、水分、灰分和“铝+硅”等安全和环境保护指标，并与船用燃料油、柴油等国家标准的要求进行比对。

2.1.3.7 船舶使用燃油标准

按照“宜燃则燃，宜柴则柴”的原则，根据发动机与燃油的匹配性，大型内河船舶和江海直达船舶在内河控制区应当使用符

合《船用燃料油》有关内河船用燃料油要求的燃油，其他内河船舶应当使用符合《车用柴油》规定的柴油。

江海直达船舶在沿海控制区应当使用硫含量不大于 0.50% m/m 的船用燃油。

2.1.4 结果核实

海事执法人员在接到检测报告后，核实船舶使用燃油是否符合《方案》及相关公约和标准要求。

2.1.5 结果处理

2.1.5.1 对使用或装载不符合标准或者要求燃油的船舶，根据违法情节，依据《中华人民共和国大气污染防治法》《防治船舶污染海洋环境管理条例》《中华人民共和国船舶及其有关作业活动污染海洋环境防治管理规定》《中华人民共和国防治船舶污染内河水域环境管理规定》等法律、行政法规和规章及我国加入的国际公约相关规定进行处理。若船舶已离港，当地海事管理机构可通报下一港海事管理机构协助调查。

2.1.5.2 船舶未按照规定保存燃油供受单证和燃油样品的，按照《防治船舶污染海洋环境管理条例》第六十二条进行处罚。

2.2 船舶燃料供给单位的检查

2.2.1 检查内容

核查燃料供给单位是否向船舶提供燃油供受单证和燃油样

品；燃油供受单证是否包括了受油船船名，船舶识别号或国际海事组织编号，作业时间、地点，燃油供应商的名称、地址和联系方式以及燃油种类、数量、密度和硫含量等信息；是否将燃油供受单证保存 3 年，是否将燃油样品妥善保存 1 年；是否持有每批次燃油的检测报告；已经检测的燃油又经调和或者与其它燃油混装的，是否进行了重新检测。

2.2.2 结果处理

（1）燃料供给单位未如实填写燃油供受单证的，或未按照规定向船舶提供燃油供受单证和燃油样品的，或未按照规定保存燃油供受单证和燃油样品的，按照《防治船舶污染海洋环境管理条例》第六十二条进行处罚。

（2）燃料供给单位未按照有关安全和防治污染规范要求从事供受油作业，或者所供应的船舶燃油超标的，由海事管理机构按规定要求整改。

2.2.3 供油质量联合监管

海事管理机构与市场监督管理（质检、工商）等部门建立船用燃油流通环节的联合监管制度，可以组织专项治理行动，开展联合执法；或者建立联合监管信息通报机制，进行执法信息互通。

3 船舶氮氧化物控制的检查

3.1 文书检查

海事管理机构结合现场监督和安全检查工作，对《船舶防止空气污染证书》、《船舶发动机防止空气污染证书》、发动机产品证书、《轮机日志》等证书文书进行检查。具体检查内容如下：

3.1.1 核查船舶类型、建造日期和发动机重大改装情况，确认船舶应当符合的氮氧化物排放标准（详见附录 1）。核查《船舶防止空气污染证书》等相关证书文书，确认发动机（应急发动机除外）氮氧化物排放水平与船舶应当符合的标准是否一致。

3.1.2 核查《轮机日志》、船舶发动机技术文件和参数记录簿、发动机实际参数是否与技术文件列明的参数一致，参数记录簿中记录的更换部件是否与技术文件中列明的一致，确认发动机是否发生了影响氮氧化物排放水平构建的改动。

3.1.3 《方案》第五条第（二）款第 8 项提及的“单缸排量大于或等于 30 升的船用柴油发动机”，可从发动机铭牌、台架试验材料中查找“单缸排量”数据；也可按照以下公式计算单缸排量： $\pi D^2 \times S / 4$ ，式中 D 为气缸直径，S 为行程，可从发动机铭牌或技术案卷中查找；如以上参数无法获得，则可将“单缸排量大于或等于 30 升的船用柴油发动机”视作“额定功率大于或等于 5000 千瓦的船用柴油发动机”。

3.2 现场检查

3.2.1 核查发动机数量及铭牌信息，确认船舶发动机的实际布置

与《船舶防止空气污染证书》记载是否一致。

3.2.2 通过询问船员、现场巡查，确认船舶应急发动机是否在非应急情况下使用。

3.3 结果处理

对船舶氮氧化物控制不符合要求的，根据违法情节，依据《中华人民共和国大气污染防治法》及我国加入的国际公约等相关规定进行处理。

4 船舶挥发性有机物控制的检查

4.1 文书检查

海事管理机构结合现场监督和安全检查工作，对船舶的《挥发性有机化合物管理计划》、《船舶防止空气污染证书》、《航海日志》、《轮机日志》等证书文书进行检查。具体检查内容如下：

4.1.1 确认船舶的种类、建造日期和国籍，确定船舶是否适用挥发性有机物排放控制要求。

4.1.2 适用《方案》第 16 条的船舶，核查其是否具有符合船舶检验规范的油气回收装置，是否配备有油气回收操作规程，是否将油气回收装置使用情况记录在《航海日志》、《轮机日志》或者其他相关记录簿中。

4.2 结果处理

对适用《方案》第 16 条的船舶不具有符合船舶检验规范的油气回收装置的，根据违法情节，依据《中华人民共和国大气污染防治法》及我国加入的国际公约等相关规定进行处理。

5 使用岸电及替代措施的检查

5.1 文书检查

海事管理机构结合现场监督和安全检查工作，对船舶文书进行检查，具体检查内容如下：

5.1.1 使用岸电的检查

5.1.1.1 核实以下船舶是否具备船舶岸电系统船载装置：2019 年 1 月 1 日及以后建造的中国籍公务船、内河船舶（液货船除外）和江海直达船舶，2020 年 1 月 1 日及以后建造的中国籍国内沿海航行集装箱船、邮轮、客滚船、3 千总吨及以上的客船和 5 万吨级（指载重吨）及以上的干散货船。上述建造时间是指船舶安放龙骨或者处于相应建造阶段的时间。

5.1.1.2 2019 年 7 月 1 日起，核查具有船舶岸电系统船载装置的现有船舶（液货船除外），在沿海控制区内具备岸电供应能力的泊位停泊超过 3 小时，或者在内河控制区内具备岸电供应能力的泊位停泊超过 2 小时，且不使用其他等效措施时，是否按规定使用了岸电。2021 年 1 月 1 日起，核查邮轮在排放控制区内具备岸电供应能力的泊位停泊超过 3 小时，且不使用其他等效措施

时，是否按规定使用了岸电。

5.1.1.3 2022 年 1 月 1 日起，核实使用的单台船用柴油发动机输出功率超过 130 千瓦、且不符合《国际防止船舶造成污染公约》第二阶段氮氧化物排放限值要求的中国籍公务船、内河船舶（液货船除外），以及中国籍国内沿海航行集装箱船、客滚船、3 千总吨及以上的客船和 5 万吨级（指载重吨）及以上的干散货船，在沿海控制区内具备岸电供应能力的泊位停泊超过 3 小时，或者在内河控制区内具备岸电供应能力的泊位停泊超过 2 小时，且不使用其他替代措施的，是否按规定加装了船舶岸电系统船载装置，是否使用了岸电。

5.1.1.4 使用岸电的船舶，核查岸电使用是否符合相关安全操作规程；核查船舶《轮机日志》中的岸电使用起止时间记录是否完整规范；核查岸电使用起止时间是否符合《方案》要求。

5.1.2 使用清洁能源或新能源的检查

使用清洁能源或新能源的船舶，核查《船舶防止空气污染证书》是否备注该船舶使用清洁能源。其中，对双燃料动力船舶，还核查换用燃料时间记录是否完整规范；核查换用燃料时的船位经纬度记录是否完整规范；核查换用燃料时的船舶位置是否符合《方案》要求；核查清洁能源、新能源和燃油的使用量记录是否完整规范等。

核查双燃料动力船舶是否可提供所有气体相关装置的维护程序和信息；船上是否能提供操作程序，并应含有一份燃料操作手册，以供经过培训的人员能够安全地操作燃料加注、储存和传输系统；船上是否配有合适的应急响应程序。

5.1.3 使用尾气后处理装置的检查

核查使用尾气后处理装置的船舶，是否持有尾气后处理装置相关产品证书；是否在船舶防止空气污染证书有相应的签注。核查船舶《轮机日志》中尾气后处理装置使用起止时间记录是否完整规范；装置使用起止时的船位经纬度记录是否完整规范；装置使用起止时船舶位置是否符合《方案》要求等。

5.1.3.1 使用废气清洗系统的检查

对使用废气清洗系统的船舶，核查其是否持有《硫氧化物排放符合证书》、废气清洗系统技术手册、船上监测手册、废气清洗系统记录簿。对使用方案 B 型废气清洗系统的船舶，还核查其是否安装了废气连续监测系统。船舶废气清洗系统洗涤水残渣应当按照船舶垃圾分类中的操作废弃物来管理，查看船舶废气清洗系统记录簿和垃圾记录簿，核查废气清洗系统洗涤水残渣是否船舶污染物接收单位接收或者排放至岸上接收设施，是否存在将洗涤水残渣排放入水或进行船上焚烧的行为。

5.1.3.2 使用选择性催化还原系统的检查

对使用选择性催化还原系统的船舶，核查其是否持有选择性催化还原系统技术案卷、还原剂的货物安全数据表（MSDS）；是否制定了减少还原剂泄漏的措施；核查是否记录还原剂每次加装上船的数量、成分和浓度，查看技术案卷中还原剂供应量及相关记录簿中选择性催化还原系统的运行时间，估算还原剂的应当消耗量，将估算的应当消耗量与加装上船数量对比，核实船舶是否按规定运行了选择性催化还原系统；对于闭环控制选择性催化还原系统或者不能提供常用工况下催化剂寿命等参数的开环控制的选择性催化还原系统，核查其是否在系统出口处安装了 NO_x 监测设备；对于未在系统出口处安装 NO_x 监测设备的开环控制的选择性催化还原系统，核查船舶是否能够提供常用工况下催化剂寿命、催化剂保养说明等材料。

5.2 现场检查

对文书检查不合格、有违规记录或存在违规嫌疑的船舶，海事管理机构对船舶使用岸电、清洁能源或新能源和加装尾气后处理装置进行现场检查，核实船舶是否达到了排放控制要求。

5.2.1 使用废气清洗系统的检查

对使用方案 B 型废气清洗系统的船舶，查看其废气连续监测系统运行情况，核查监测数据是否按规定保存 18 个月，记录的 SO_2/CO_2 比值是否符合《2015 年废气清洗系统导则》

(MEPC. 259(68)号决议)要求,验证废气清洗系统废气排放符合性。

核查船舶是否安装洗涤水连续监测系统,查看该系统运行情况,核查监测数据是否按规定保存 18 个月,记录的洗涤水 PH 值、PAH 值和浊度等参数是否符合《2015 年废气清洗系统导则》要求,可进一步对洗涤水进行取样送检,核实其排放是否符合《2015 年废气清洗系统导则》要求。核查船舶是否在内河控制区、沿海控制区内的港口水域和渤海水域排放了开式废气清洗系统的洗涤水。

5.2.2 使用选择性催化还原系统的检查

对使用选择性催化还原系统的船舶,查看其电控系统是否具有数据记录功能,是否自动记录选择性催化还原系统一定数量的最新运行数据,是否对运行过程中的报警及故障等异常状态进行存储,是否将记录数据至少保留 18 个月。

核查选择性催化还原系统出口处的 NO_x 监测设备是否运行正常,将监测的 NO_x 浓度值与柴油机初次检验发证时相应模式点的 NO_x 浓度值进行对比,核实选择性催化还原系统是否具有足够的降 NO_x 能力,是否符合《2011 年关于装有选择性催化还原(SCR)系统船用柴油机特殊要求的2008 年 NO_x 技术规则补充指南》(MEPC. 291(71)号决议)要求。

5.3 结果处理

船舶采取替代措施未符合《方案》要求的，根据违法情节，依据《中华人民共和国大气污染防治法》及我国加入的国际公约等相关规定进行处理。

6 豁免或免责的提出和处理

6.1 豁免或免责的提出

船方提出豁免或免责的，应当向当地海事管理机构提供相应的证明材料，其中船舶需要进行结构或设备改造后才能使用符合要求燃油的，应当提供船舶检验机构出具的证明材料、船舶相关证书文书、船舶改造计划及完成时间等证明材料；船舶无法获取符合要求燃油的，应当在到港前至少提前 24 小时（航程不足 24 小时的在船舶开航前）向目的港海事管理机构报告至少以下信息：船舶和公司基本信息、航次计划和拟进出控制区的时间和地点，并提供试图购买合规燃油的证据、努力寻找替代燃油来源的证据、获得合规燃油的计划等证明材料。

6.2 豁免或免责的处理

海事管理机构对提出豁免或免责的船舶及时进行核实，情况属实的，可暂不执行《方案》相关控制要求。发现不再具备豁免或免责条件的，或者提供的材料存在虚假情形的，不予豁免或免责并按规定处理。

7 信息报送

接收船舶因使用不合规燃油造成机器故障信息、无法获取符合要求燃油信息的海事管理机构，应当通过所属的直属海事管理机构或地方省级海事管理部门将接收、调查或核实情况每季度报送部海事局。

附录 1

船舶燃油硫含量控制要求

船舶类型		排放控制区			非排放控制区	
		沿海控制区		内河控制区	沿海水域	内河水域
		海南水域	其他水域			
海 船		2019. 1. 1 起， ≤0. 50% 2022. 1. 1 起， ≤0. 10%	2019. 1. 1 起，≤0. 50% 2025. 1. 1 起，≤0. 10% (待评估)	2019. 1. 1 起， ≤ 0. 50% 2020. 1. 1 起， ≤ 0. 10%	2012. 1. 1 起， ≤3. 50% 2020. 1. 1 起， ≤0. 50%	2012. 1. 1 起， ≤ 3. 50% 2020. 1. 1 起， ≤ 0. 50%
内 河	大型内河 船	——	——	2019. 1. 1 起，使用 符合新修订船用	——	2019. 1. 1 起，使用 符合新修订船用燃

船				燃料油标准的燃油		料油标准的燃油
	其他内河船	——	——	2019.1.1起,使用符合国家标准的柴油	——	使用符合国家标准 的柴油
江海直达船		2019.1.1起, ≤0.50%	2019.1.1起,≤0.50%	2019.1.1起,使用符合新修订船用燃料油标准的燃油	2012.1.1起, ≤3.50% 2020.1.1起, ≤0.50%	2019.1.1起,使用符合新修订船用燃料油标准的燃油

船舶氮氧化物控制要求

船舶类型	排放控制区		非排放控制区
	沿海控制区	内河控制区	

		海南水域	其他水域		
国际航行船舶		2000.1.1 及以后，功率 130 千瓦以上，≤国际 1 阶段限值 2011.1.1 及以后，功率 130 千瓦以上，≤国际 2 阶段限值			
国内航行船舶	中国籍	2015.3.1 及以后，功率 130 千瓦以上， ≤国际 2 阶段限值 2022.1.1 及以后，排量 30 升及以上， ≤国际 3 阶段限值	2015.3.1 及以后，功率 130 千瓦以上， ≤国际 2 阶段限值 2025.1.1 及以后，排量 30 升及以上， ≤国际 3 阶段限值（待评估）	2015.3.1 及以后，功率 130 千瓦以上， ≤国际 2 阶段限值 2022.1.1 及以后，排量 30 升及以上， ≤国际 3 阶段限值	2015.3.1 及以后，功率 130 千瓦以上， ≤国际 2 阶段限值
	外国籍	——			

附录 2

委托书

关于_____

_____船公司/代理公司：

我司谨在此委托你公司就船舶燃油质量检测达标事宜配合海事局处理，若有后续问题，请代为处理。

指定人员姓名及联系方式：

船名（船章）：

船长签名：

日期：

Trust Deed

Re: _____

TO: _____

I hereby entrust you to settle down the qualification test of fuel oil used on board with _____ Maritime Safety Administration on behalf of me, if any problems, please hand them for my ship' s company.

The name and the phone number of the Designated person:

Ship' s Name:

Captain Signature:

Date:

附录 3

_____海事局燃油样品标签

_____MSA FUEL SAMPLE IDENTIFICATION LABEL

样品编号 Sample No.		取样日期和时间 Date & Time	
样品名称 Sample Description	☐ 国际船舶 ☐ 沿海船舶 ☐ 内河船舶		
规格等级 Product Grade	☐ 柴油 Diesel Oil ☐ 180#RMG ☐ 380#RMK ☐ 500#RMK ☐ 其他（请写明）：		
取样船名 Ship Name		取样位置 Sampling Location	
执法人员（2人） Officers		船方代表签字 Captain/Person in Charge	
密封号 Seal No.			

附录 4

豁免或免责情形报告表

船舶名称:	国籍/船籍港:
总吨:	IMO 编号/船舶识别号:
船舶种类:	建造日期:
上一港:	下一港:
所有人:	经营人:
靠泊码头:	靠泊日期及时间:
代理公司:	
理由:	
证明材料清单:	
日期: (盖章)	

抄送: 各省、自治区、直辖市交通运输厅(局、委), 上海组合港管
委会办公室, 长江航务管理局、珠江航务管理局, 中国船级社

交通运输部海事局

2018 年 12 月 29 日印发
