



JAPAN P&I NEWS

外航組合員各位

中国 - 大気汚染物質排出規制エリア (ECA) (その 16)

中国の法律事務所 HAI TONG & PARTNERS より、中国運輸省海事局から各地区の海事局に対する ECA 監督、管理の実施作業を統一するための通知の英語版を入手しましたので、原文とあわせてご案内します。

以上

添付資料： Document of P.R. China MSA HWF [2018] No.555 (英語版)
China ECA Plan Guideline 2018-CHN (中国語原文)

Document of P.R. China MSA

HWF [2018] No.555

Notice of China MSA under MOT on Standardizing the Implementation Work of Supervision and Administration on Ship Air Pollutants Emission Control Area

All MSA directly under China MSA,

In order to thoroughly implement and fulfill requirements in the Implementation Plan of Ship Air Pollutants Emission Control Area (JHF[2018] No.168, hereinafter referred to as “the Plan”), ensure that various policy requirements for ship air pollutants emission control areas are fulfilled effectively, it is hereby notified relevant matters concerning further clarification of relevant requirements for ship emission control area as well as standardizing the supervision and administration work as follows:

I. Further clarification on relevant requirements for ship emission control area (ECA)

- (1) Fuel oil used by ship within ECA shall meet requirements of the Plan. Fuel oil used by inland-river ships and river-sea ships entered into inland river ECAs shall meet the current standards before national standards for marine fuel oil and diesel oil are amended and implemented.
- (2) Ships that need to switch to low-sulfur fuel oil shall formulate and equip themselves with written fuel oil switch procedure. Ship shall finish low-sulfur fuel oil switch before entering into ECA, ensure that they have already been using low-sulfur fuel oil when entering into ECA; where a ship switches to high-sulfur fuel oil, she shall not begin the fuel oil switch operation until she has left the ECA; the ship shall record information such of the starting and ending time of fuel oil switch, longitude and latitude of ship’s position, sulfur content of fuel oil used before and after the switch operation as well as remaining volume in fuel oil tank, quantity of low-sulfur

- fuel oil used, etc. in corresponding record books such as the engine logbook.
- (3) Ship NO_x emission control shall conform to requirements in the MARPOL, the Technical Rules on Statutory Inspection for Ships and Offshore Facilities as well as the Plan. Where a ship's engine undergoes major conversion which affects her NO_x emission level, she shall adopt measure to reach the same emission level before the conversion and apply for inspection from ship inspection institute.
- (4) Where a ship uses shore power, she shall operate in accordance with relevant safe operation procedure, record information such as the starting and ending time of use of show power as well as the name of the operator in the engine logbook or other relevant books.
- (5) Where a ship uses clean energy such as LNG, new energy or other alternative measures, safety for her navigation, berthing and operation shall not be affected, meanwhile, relevant safe operation procedures shall be met, and situation concerning such use shall be recorded in the engine logbook or other relevant record books. A double-fuel ship shall record such information as the quantity of various fuels used, time of fuel switch, longitude and latitude of ship's position and the name of operator in the engine logbook or other relevant books.
- (6) Where a ship applies exhaust gas **after**-treatment device, she shall, as required, hold exhaust gas **after**-treatment device product certificate issued by ship inspection institute and keep such device operate in good condition. A ship that adopts Scheme B exhaust gas cleaning system in the *2015 Guidelines for Exhaust Gas Cleaning Systems* (MEPC.259(68) Resolution) shall install and use exhaust gas continuous monitoring system; ships adopting closed loop control Selective Catalytic Reduction (SCR) system and ships adopting open loop control SCR system that is unable to provide such indexes as the service life of catalyzer under the operating state of common use shall install and use NO_x monitoring equipment. The ship shall record such information as the starting and ending time of use of exhaust gas **after**-treatment device, longitude and latitude of ship's position as well as the name of the operator to the engine logbook or other relevant books.
- (7) The discharge and treatment of water pollutants generated by exhaust gas **after**-

treatment device used by a ship shall conform to requirements of relevant regulations. It is prohibited to discharge into Inland River ECAs, waters of ports in Coastal ECAs and Bohai sea waters the washing water generated from open exhaust gas cleaning system. Requirements for prohibiting the discharge into waters within other coastal ECAs the washing water generated from open exhaust gas cleaning system will be promulgated in due time for implementation. It is also prohibited to discharge into water or burn onboard the washing water residuals generated from exhaust gas cleaning system, the ship shall truthfully record the situation regarding the storage and disposal of washing water residuals generated from exhaust gas cleaning system.

(8) In any of the following situations, where a ship uses fuel oil that does not meet the requirements in the Plan, she shall apply with local MSA for immunity or exemption (please refer to Annex 4 *Supervision and Administration Guideline on Ship Air Pollutants Emission Control Area* for the details of Report Form for Situation of Immunity or Exemption):

1. The ship could not use fuel oil that meets the requirements until her structure and equipment undergo conversion, but such conversion shall be completed within one year after implementation of the Plan;
2. The ship could not obtain fuel oil that meets the requirements although she has made every possible effort;
3. The ship is unable to conform to requirements of the Plan within specified time limit due to breakdown or malfunction of her relevant equipment;
4. The ship could not conform to requirements of the Plan within specified time limit as she has to ensure the safety of the ship or renders salvage of life at sea.

II. Standardizing the supervision and administration work

(1) All MSAs directly under China MSA shall carry out supervision and administration work for ship ECAs in accordance with requirements in relevant laws, regulations and the Plan and with reference to the *Supervision and Administration Guideline on Ship Air Pollutants Emission Control Area* (see the Attachment).

All relevant MSAs shall provide support and cooperation to the Yangtze River Administration of Navigational Affairs, the Pearl River Administration of Navigational Affairs and the Shanghai Portfolio Port Management Committee Office to carry out administration for ship air emission control in according with their respective division of duties.

- (2) Where a coastal prefecture-level city proposes to, with reference to requirements of ECAs in inland rivers, put in place control requirements for sulfur content of fuel oil used by sea-going ships entering into the navigable waters of inland river within its administrative jurisdiction, the corresponding local provincial MSA shall report to China MSA in advance.

This Notice will come into implementation as of January 1, 2019. The Notice of P.R. China MSA on Strengthen the Supervision and Administration for Ship Emission Control Area (HCJ [2016] No.46), the Notice of Notice of P.R. China MSA on Further Strengthen Quality Supervision and Administration for Marine Fuel Oil (HWF [2016] No.11) and the Notice of P.R. China MSA on Regulating the Supervision and Administration for Prevention and Control of Ship Air Pollution (HWF [2016] No.454) shall be simultaneously repealed.

Attachment: Supervision and Administration Guideline on Ship Air Pollutants Emission Control Area

P.R. China MSA (Seal)

December 29, 2018

Attachment

Supervision and Administration Guidelines on Ship Air Pollutants Emission Control Area

1. General Provisions

1.1 Purpose

These Guidelines are formulated for the purpose of implementing the Implementation Plan of Ship Air Pollutants Emission Control Area (hereinafter referred to as “the Plan”) printed by the MOT and providing reference for MSAs to carry out supervision and administration on ship air pollutants emission control.

1.2 Basis

These Guidelines are compiled in accordance with laws, administrative regulations and rules such as the Law of PRC on the Prevention and Control of Atmospheric Pollution, the Regulations on Administration of the Prevention and Control of Marine Environment Pollution Caused by Vessels, the Regulations of PRC on Prevention and control of Marine Pollution caused by Vessels and their Relevant Operations, the Regulations on Prevention and Control of Pollution to Inland Rivers by Vessels, the Implementation Plan of Ship Air Pollutants Emission Control Area as well as standards and specifications such as the Marine Fuel Oils, the Technical Rules on Statutory Inspection for Ships and Offshore Facilities and the Technical Rules on Statutory Inspection of River-sea Ships in Certain Routes (2018), etc.

1.3 Subjects for Application

These Guidelines are applicable to ships navigating, berthing and operating within emission control areas (ECAs), excluding military vessels, boats for sports purpose and fishing boats.

1.4 Terminology and Definition

1.4.1 “**River-sea ship**” means a ship that meet definition in the Technical Rules on

Statutory Inspection of River-sea Ships in Certain Routes (2018).

- 1.4.2 **“Current ship” in Art.11 of Section V of the Plan** means a Chinese or foreign ship that has already in employment before July 1, 2019, including ships to be used for public service purpose.
- 1.4.3 **“Liquid cargo carrier”** means a ship that was built or converted to be suitable for carriage of bulk flammable liquid cargo, including oil tanker, chemical carrier and liquefied gas carrier.
- 1.4.4 **“Cruise”** means high-end passenger ship with tourism as purpose and sailing in fixed routes, including Chinese and foreign cruise, newly built cruise and current cruise.
- 1.4.5 **“Berthing” in Art.11, 12 and 13 of Section V of the Plan** means the period from the moment when the ship begins to berth firmly at certain berth till the moment when she unfastens from the berth, excluding anchoring and anchored through buoys; “moor at a berth stably” means a status that all ropes of the ship are completely fastened; “unlashes from such berth” means a status that all rope of the ship are cast off.
- 1.4.6 **“Exhaust gas after-treatment device”** means a marine equipment that enables the ship to obtain air pollution emission reduction effect equivalent to or better than implementation of the Plan by decreasing the content of SO_x, NO_x and particulate matter in exhaust gas of ship based on technical means of desulfurization and denitration.
- 1.4.7 **“Test unit holding specified qualification of the State”** means a laboratory affirmed by quality and technology supervision department of provincial level or above or recognized by the China National Accreditation Service for Conformity Assessment.

2. Check on use and supply of marine fuel oil

2.1 Check of use of marine fuel oil

2.1.1 Monitoring of ship exhaust gas

MSAs may, in combination with characteristics within their respective jurisdictions,

deploy ship exhaust gas monitoring equipment, to preliminarily screen out ships suspected of using fuel oil the sulfur content of which exceeds corresponding standard and whose NOx emission exceeds corresponding standard based on ship exhaust gas monitoring in combination with systems such as the AIS. Where the suspected ships does not moor within their respective jurisdictions, relevant information shall be circulated to the local MSA of the place where such ship proposes to moor. P.R. China MSA will gradually promote the incorporation of ship air pollutants monitoring work into the dangerous cargo control and pollution prevention information management system.

All MSAs shall take ships having records of illegal discharge/emission and ships suspected of using fuel oil the sulfur content of which exceeds corresponding standard and whose NOx emission exceeds corresponding standard found based on exhaust gas monitoring as the prior targets to be checked.

2.1.2 Check documents

MSAs shall, in combination with on-site supervision and safety inspection work, check ship's materials such as the engine logbook, documents for supplying and receiving of fuel oil, fuel consumption information report. Specific content for such check is as followings:

2.1.2.1 Engine Book: check on whether the records of information concerning the starting and ending time of fuel oil switch, longitude and latitude of ship's position, sulfur content of fuel oil used before and after the switch operation as well as remaining volume in fuel oil tank, quantity of low-sulfur fuel oil used, name of operator, etc. are standardized and complete, verify on whether the ship's position at the time when the oil switch operation is finished meets requirements of the Plan.

2.1.2.2 Documents for supplying and receiving of fuel oil: check on whether the ship holds documents for supplying and receiving of fuel oil and keeps them for 3 years as required, whether fuel oil as recorded in such documents meets corresponding requirements, focusing on whether safety and environment protection indicators such as sulfur content, flash point, acidity, condensation

point, moisture, mechanical impurity, etc. conform to specified minimum limit value.

2.1.2.3 Fuel oil switch procedure: check on whether the ship holds written fuel oil switch procedure, whether such procedure is incorporated into ship's safety management system (in case of a ship subject to safety management system) or other operation procedures (in case of a ship not subject to safety management system), and whether the fuel oil switch operation records are standardized and complete.

2.1.2.4 Receiving and investigation on malfunction information of ship using fuel oil that does not conform to corresponding provisions: where a ship encounters malfunction to her machine/equipment due to use of fuel oil that does not conform to corresponding provisions, she shall report to at least the following information to the MSA at the place where such malfunction occurred: basic information of the ship and company, voyage plan, time and place for entering into or leaving from ECA, time and place of the malfunction, malfunction details, name and address of the supplier of the fuel oil used, time and place of bunkering, information specified on the document for supplying and receiving of fuel oil.

MSA shall conduct investigation on the ship that reported the malfunction information, verify on whether such malfunction to machine/equipment was caused by use of fuel oil that does not conform to corresponding provisions.

2.1.3 Check fuel oil

2.1.3.1 Check fuel oil sample

Check samples retained on board, whether such sample was sealed and signed by supplier's representative and the master or the officer responsible for bunkering operation after the completion of the bunkering operation; verify on whether the ship retained for at least 12 months from the time when fuel oil of such sample was basically exhausted.

2.1.3.2 Check fuel oil pipelines

Check on whether the layout of ship's fuel oil pipelines and drawings of fuel oil

pipelines meet requirements of corresponding provisions; whether fuel oil pipelines are consistent with fuel oil pipelines drawings; whether the valve of fuel oil pipelines stops at the low-sulfur level or high-sulfur level; verify on whether the ship actually carried out fuel oil switch operation.

2.1.3.3 Estimation on quantity of marine fuel oil used

Theoretically, low-sulfur fuel oil consumption after a ship enters into ECA may be estimated through the following formula: $AX+BY+CZ$ (ton), amongst which, A is oil consumption rate of ship's main engine, with unit as ton/nautical mile (nm); B is oil consumption rate of ship's auxiliary engine, with unit as ton/hour; C is the oil consumption rate of boiler, with unit as ton/hour; X is the propulsion distance (navigation distance) of the ship in ECA, with unit as nm(nautical mile); Y is duration that ship's auxiliary engine is used in ECA, with unit as hour; Z is duration that ship's boiler is used in ECA, with unit as hour. The above parameters may be found from records such as logbook and engine logbook.

Verify the quantity of low-sulfur fuel oil refuelled on board and the actual quantity of low-sulfur fuel oil retained on board. Compare the **theoretically** calculated value with the actual quantity of low-sulfur fuel oil retained onboard, so as to preliminarily judge on whether the ship has, as required, switched to low-sulfur fuel oil (all fuel oil equipment on board, including main engine, auxiliary engine and boiler shall use low-sulfur fuel oil).

2.1.3.4 Check the temperature and viscosity of fuel oil

Check data such as the temperature and viscosity of fuel oil entry into the main engine and auxiliary engine, its history tendency chart (if any) as well as alarm records, etc., so as to further verify on whether the ship used low-sulfur fuel oil.

2.1.3.5 Check fuel oil loaded by the ship

By looking into the document for supplying and receiving of fuel oil, oil record book and remaining volume of fuel oil tank, check on whether ships that have not adopted alternative measures such as SO_x and particulate matter control device as of March 1, 2020 only loaded fuel oil that she shall load as required. For a ship that navigates in and out of different ECAs, she shall be allowed to

load fuel oil that meets requirements for use in and out of related ECAs.

2.1.3.6 Sampling and test of fuel oil

For a ship that is found unqualified or having violation record during document check, or a ship that is found suspected of committing violation, MSA **shall** conduct random inspection for fuel oil of such ship; for a ship that is qualified and having no violation record after document check and not suspected of committing violation after check, MSA **may** conduct random inspection for fuel oil of such ship.

(1) fuel oil quick test

MSA may use quick testing equipment to conduct preliminary test for the sulfur content of fuel oil used on board. Based on the test result, judge preliminarily on whether the sulfur content of fuel oil exceeds corresponding standard (refer to Annex 1 for details). Where the preliminary test result indicates exceeding corresponding standard by 10%, it is suggested that such fuel oil shall be sent to laboratory for test and require the ship to issue the Trust Deed (refer to Annex 2 for details).

For the sampling work involved in use of quick test equipment, see the Section “Fuel oil sampling”.

(2) Fuel oil sampling

Take samples from the in-use fuel oil service tank or from downstream pipeline in-use fuel oil service tank, as close to the combustion system as safely feasible (such as fuel oil sampling point set up by the ship, the last filter on the fuel oil intake pipeline or the scavenging valve that is closest to device that uses fuel oil). Sampling may be carried out jointly by law enforcement officer and crew member, third party institute may also be entrusted for such work, samples may be collected with reference to the IMO’s Guidelines for Sampling of Fuel Oil Used on Board Ships. At least 3 oil samples shall be taken for a same sampling point, each sample shall at least contains 400ml fuel oil, one to be handed over to the ship, one to be sent to lab for analysis and one to be retained by MSA. Fill up the fuel oil sample label, seal number. After signed by ship’s

representative and two law enforcement officers, paste the label (refer to Annex 3 for details) on the bottles.

(3) Send samples to lab for analysis

Law enforcement officers seal up the samples at safe place of low temperature, sheltering from sunlight. After sampling, send samples timely to fuel oil test unit holding corresponding qualification, and the fuel oil test unit shall carry out test for the samples according to test procedure in Annex VI of Supplementary Provision VI of MARPOL as well as test method clarified in currently effective standard of the State. The test report shall indicate the sulfur content of the fuel oil, if conditions permit, carry out random test for safety and environment protection indicators of the fuel oil depending on actual situation, such as viscosity, flash point, acid value, pour point, moisture, ash content and “aluminium+ silicon”, compare them with the requirements in national standards concerning marine fuel oil and marine diesel oil.

2.1.3.7 Standards for ship to use fuel oil

According to the principle of “if the ship is suitable to burn fuel oil, then she may use fuel oil; if the ship is suitable to burn diesel oil, then she be use diesel oil”, pursuant to the matching extent of engine to fuel oil, when they are in ECA of inland rivers, large inland river ship and river-sea ship shall use fuel oil that meets requirements in the Marine Fuel Oil regarding fuel oil to be used by inland river ships, and other inland river ships shall use diesel oil that meets the Automobile Diesel Fuels.

River-sea ships shall use marine fuel oil with sulfur content not exceeds 0.50% m/m when they are in coastal ECAs.

2.1.4 Result verification

Upon receipt of the test report, maritime law enforcement officer shall verify on whether the fuel oil used by the ship meets requirements in the Plan and relevant conventions and standards.

2.1.5 Handling of result

2.1.5.1 For a ship that uses or loads fuel oil not meeting standards or requirements,

based on actual situation of violation, handle in accordance with laws, administrative regulations and rules such as the Law of PRC on the Prevention and Control of Atmospheric Pollution, the Regulations on Administration of the Prevention and Control of Marine Environment Pollution Caused by Vessels, the Regulations of PRC on Prevention and control of Marine Pollution caused by Vessels and their Relevant Operations, the Regulations on Prevention and Control of Pollution to Inland Rivers by Vessels as well as relevant international conventions acceded to by China. If the ship has left the port, local MSA may notify the MSA at the place of the ship's next port to assist for investigation.

2.1.5.2 Where a ship fails to retain document for supplying and receiving fuel oil or the fuel oil sample, impose punishment in accordance with Art.62 of the Regulations on Administration of the Prevention and Control of Marine Environment Pollution Caused by Vessels.

2.2 Check on unit supplying marine fuel oil

2.2.1 Content to be checked

Check on whether the unit supplying marine fuel oil provided the ship with document for supplying and receiving fuel oil and fuel oil sample; whether the document for supplying and receiving fuel oil includes the name of the ship, ship's ID number or IMO number, time and place of operation, the name, address and contact details of the fuel oil supplier, the type, quantity, density and sulfur content of fuel oil; whether the document for supplying and receiving fuel oil was retained for 3 years and whether fuel oil samples were properly retained for 1 year; whether the such unit holds test report for each batch of fuel oil; where the fuel oil that had already been tested was syncretized or mixed and loaded with other fuel oil, whether re-test was carried out for the same.

2.2.2 Handling of result

(1) Where a unit fails to truthfully filled up the document for supplying and receiving fuel oil, or fails to provide ship with document for supplying and receiving fuel oil or fuel oil sample in accordance with corresponding provisions, or fails to retain document for supplying and receiving fuel oil or

fuel oil sample in accordance with corresponding provisions, impose punishment in accordance with Art.62 of the Regulations on Administration of the Prevention and Control of Marine Environment Pollution Caused by Vessels.

- (2) Where a unit supplying fuel oil failed to engage operation of supplying fuel oil in accordance with requirements in relevant regulations and norms concerning safety and prevention and control of pollution, or the marine fuel oil supplied by such unit exceeded corresponding standards, the MSA orders it to make rectification as required.

2.2.3 Joint quality supervision on supplying of fuel oil

MSAs and market regulation (quality inspection, industry & commerce) departments establish joint supervision and administration system for the circulation section of marine fuel oil. They may organize special treatment actions, conduct joint law enforcement activities; or they may establish joint supervision and administration information bulletin mechanism to share law enforcement information.

3. Check on ship NOx control

3.1 Check documents

MSAs shall, in combination with on-site supervision and safety inspection work, check ship's documents such as the Ship Air Pollution Prevention Certificate, Ship Engine Air Pollution Prevention Certificate, engine certificate and engine logbook, etc. Specific content for such check is as followings:

- 3.1.1 Check on the type and construction date of the ship, the situation of major conversion of ship's engine, confirm that the ship shall conform to NOx emission standard (refer to Annex 1 for details). Check relevant certificate documents such as the Ship Air Pollution Prevention Certificate, confirm on whether NOx emission level of engine (excluding emergency engine) is consistent with the standard that such shall meet.

- 3.1.2 Check the engine logbook, technical documents and parameter record book of ship's engine; whether actual parameter of engine is consistent with those listed in technical documents; whether change of components recorded in parameter record book is consistent with that listed in technical documents; confirm on whether engine has undergone conversion to its structure which affects the NOx emission level.
- 3.1.3 In respect of "displacement of a single cylinder of marine diesel engineis or above 30L" mentioned in Item (8), Para.2 of Art. V of the Plan, the "displacement of a single cylinder" data may be found from the data plate of the engine and the bench test materials; displacement of a single cylinder may also be calculated as per the following formula: $\pi D^2 \times S / 4$, amongst which, D is the cylinder diameter, S is travel, they can be found from the engine data plate or technical documents; if the above parameter is unavailable, the "displacement of a single cylinder of marine diesel engineis or above 30L" may be treated as "power rating of marine diesel engineis or above 5000kw".

3.2 On-site inspection

- 3.2.1 Check the quantity of engines and their data plates; confirm on whether actual layout of ship's engine is consistent with the information specified in the Ship Air Pollution Prevention Certificate.
- 3.2.2 By inquiries into crew members and on-site patrol, confirm on whether the ship's emergency engine was used under non-emergency situation.

3.3 Handling of result

Where a ship's NOx emission control does not meet corresponding requirements, handle the same based on the actual situation of violation and in accordance with relevant provisions in the Law of PRC on the Prevention and Control of Atmospheric Pollution as well as international conventions acceded to by China.

4. Check on ship's volatile organic compounds (VOCs) control

4.1 Check documents

MSAs shall, in combination with on-site supervision and safety inspection work, check

ship's certificates and documents such as the VOCs Management Plan, the Ship Air Pollution Prevention Certificate, the Logbook and the Engine Logbook, etc. Specific content for such check is as followings:

4.1.1 Confirm the type, construction date and nationality of the ship; confirm on whether the ship shall be subject to the VOCs emission control requirements.

4.1.2 For a ship subject to Art.16 of the Plan, check on whether such ship has oil and gas recovery device that meets ship inspection specification; whether such ship equips with oil and gas recovery operation procedure; whether the situation for use of such oil and gas recovery device is recorded in the Logbook, Engine Logbook or other relevant record books.

4.2 Handling of result

For a ship subject to Art.16 of the Plan but does not have oil and gas recovery device that meets ship inspection specification, handle the same based on the actual situation of violation and in accordance with relevant provisions in the Law of PRC on the Prevention and Control of Atmospheric Pollution as well as international conventions acceded to by China.

5. Check on use of shore power and alternative measures

5.1 Check documents

MSAs shall, in combination with on-site supervision and safety inspection work, check ship's certificates and documents. Specific content for such check is as followings:

5.1.1 Check on use of shore power

5.1.1.1 Verify on whether the following ships have ship-borne appliance for shore power system: Chinese public service ships, inland river ships (excluding liquid cargo carrier) and river-sea ships built on or after January 1, 2019; Chinese container ships, passenger ro-ro ships, passenger ships of or above 3000GT and dry bulk cargo ships of or above 50000GT(DWT) engaged in domestic coastal voyage built on or after January 1, 2020. The aforesaid construction date means the date when the keels of ship are laid or are at a similar stage of construction.

5.1.1.2 As of July 1, 2019, check on whether current ships (excluding liquid cargo

carrier) equipped with ship-borne appliance for shore power system, as required, used shore power if they moor, without using other alternative measures of equivalent effects, for more than 3 hours at a berth in a Coastal ECA that is capable of supplying shore power or for more than 2 hours at a berth in Inland River ECA that is capable of supplying shore power. As of January 1, 2021, check on whether cruises, as required, used shore power if they moor, without using other alternative measures of equivalent effects, for more than 3 hours at a berth in a Coastal ECA that is capable of supplying shore power

5.1.1.3 As of January 1, 2022, for Chinese public service ships, inland river ships (excluding liquid cargo carrier) using marine diesel engines the output power of a single one exceeds 130kw and failing to meet the NOx emission limit of stage-2 in the MARPOL as well as Chinese container ships, passenger ro-ro ships, passenger ships of or above 3000GT and dry bulk cargo ships of or above 50000GT(DWT) engaged in domestic coastal voyage, if they moor, without using other alternative measures of equivalent effects, for more than 3 hours at a berth in a coastal ECA that is capable of supplying shore power or for more 2 hours at a berth in an ECA in inland river that is capable of supplying shore power, verify on whether they, as required, equipped with ship-borne appliance for shore power systems and whether they used shore power.

5.1.1.4 For a ship using shore power, check on whether the use of shore power conforms to relevant safe operation procedure; check on whether the record in ship's Engine Logbook regarding starting and ending time for use of shore power is complete; verify on whether the starting and ending time for use of shore power conforms to requirements in the Plan.

5.1.2 Check on use of clean energy or new energy

For a ship using clean energy or new energy, check on whether corresponding remark that such ship uses clean energy was made in her Ship Air Pollution Prevention Certificate. Amongst which, for a double-fuel ship, check on whether the record for the time of switch of fuel is complete and normative, whether the record for longitude and latitude of ship's position at the time of fuel switch is

complete and normative, whether the ship's position at the time of fuel switch meets requirements in the Plan, and whether the record for the quantity of clean energy, new energy and fuel oil used is complete and normative.

Check on whether a double-fuel ship can provide maintenance and information for all devices relating to gas; whether the ship can provide operation procedure which shall include a fuel operation manual enabling personnel who underwent training to operate refuelling, storage and transmission system safely for fuel; whether the ship is equipped with proper emergency response procedure.

5.1.3 Check on use of exhaust gas after-treatment device

For a ship using exhaust gas **after**-treatment device, check on whether the ship holds relevant product certificate for such exhaust gas **after**-treatment device; whether corresponding endorsement was made in the Ship Air Pollution Prevention Certificate. Check on whether the record in the ship's Engine Logbook regarding the starting and ending time for use of exhaust gas **after**-treatment is complete and normative; whether the record for longitude and latitude of ship's position at the starting and ending time of use of such device is complete and normative; and whether the ship's position at the starting and ending time of use of such device meets requirements in the Plan.

5.1.3.1 Check on use of exhaust gas cleaning system

For a ship that adopts exhaust gas cleaning system, check on whether the ship holds Certificate of Compliance for NO_x Emission, exhaust gas cleaning system technical manual, onboard monitoring manual and exhaust gas cleaning system record book. For a ship that adopts Scheme B exhaust gas cleaning system, also check on whether the ship is installed with exhaust gas continuous monitoring system. Washing water residuals generated from exhaust gas cleaning system of the ship shall be managed as operating waste in the category of ship garbage. Look into the ship's exhaust gas cleaning system record book and garbage record book, check on whether washing water residuals generated from exhaust gas cleaning system of the ship were received by unit receiving ship pollutants or were discharged to onshore receiving facility; whether there was any scenario of discharging into water or burning onboard the washing water residuals generated

from exhaust gas cleaning system of the ship.

5.1.3.2 Check on use of SCR(Selective Catalytic Reduction) system

For a ship that adopts SCR system, check on whether the ship holds SCR system technical files and the Material Safety Data Sheet (MSDS) of reductant; whether the ship formulated measure for reducing the leakage of reductant; check on whether the quantity, components and density of reductant loaded onboard each time was recorded; look into technical files for the quantity of reductant supplied as well as running time of SCR system in relevant record books, estimate the quantity of reductant that shall have been consumed, make comparison between the estimated quantity of reductant that shall have been consumed and the quantity of reductant loaded onboard, so as to verify on whether the ship run the SCR system as required; for closed loop control SCR system and open loop control SCR system that is unable to provide such indexes as the service life of catalyzer under the operating state of common use, check on whether NO_x monitoring equipment was installed at the exit of such system; for open loop control SCR system with no NO_x monitoring equipment installed at the exit of such system, check on whether the ship can provide materials such as the information regarding service life of catalyzer under the operating state of common use, instruction for maintenance catalyzer.

5.2 On-site inspection

For a ship that is found unqualified upon documents check or having records of violation or suspected of committing violation, MSA shall carry out on-site inspection on the ship regarding the use of shore power, the use of clean energy or new energy and the installation of exhaust gas **after**-treatment device. Verify on whether the ship meets corresponding emission control requirement.

5.2.1 Check on use of exhaust gas cleaning system

For a ship that adopts Scheme B exhaust gas cleaning system, look into the running situation of ship's exhaust continuous monitoring system, check on whether the monitoring data was retained for 18 months as required, whether the SO₂/CO₂ ratio meets the requirement in the *2015 Guidelines for Exhaust Gas Cleaning Systems*

(MEPC.259(68) Resolution), and verify the conformity of exhaust gas emission of exhaust cleaning system.

Check on whether the ship installs washing water continuous monitoring system, look into the running situation of such system, check on whether monitoring data was retained for 18 months as required, whether recorded parameters such as the PH value, PAH value and turbidity meet requirements in the *2015 Guidelines for Exhaust Gas Cleaning Systems*. MSA may further collect samples of the washing water and send the same for lab test, so as to verify on whether discharge of such washing water meets requirements in the *2015 Guidelines for Exhaust Gas Cleaning Systems*. Check on whether the ship discharged into waters of Inland River ECAs, ports in Coastal ECAs and Bohai sea waters the washing water generated from open exhaust gas cleaning system.

5.2.2 Check on use of SCR system

For a ship that adopts SCR system, check on whether the ship's electronic control system has the data recording function, whether such electronic control system recorded automatically certain quantity of latest running data of the SCR system, whether abnormal status during the system running such as alarming and malfunction(breakdown) was memorized, and whether recorded data was retained as least for 18 months.

Check on whether the NOx monitoring equipment at the exit of SCR system runs at normal status, make comparison between the NOx density so monitored and the NOx density of corresponding mode of diesel engine at the time certificate issuance after initial test, so as to verify on whether the SCR system has sufficient NOx reduction capability, and whether it meets requirements in the *2011 Guidelines Addressing Additional Aspects to the NOx Technical Code 2008 with regard to Particular Requirements Related to Marine Diesel Engines Fitted with Selective Catalytic Reduction (SCR) Systems* (MEPC.291(71) Resolution).

5.3 Handling of result

Where a ship adopting alternative measures fails to meet requirements in the Plan, handle the same based on the actual situation of violation and in accordance with

relevant provisions in the Law of PRC on the Prevention and Control of Atmospheric Pollution as well as international conventions acceded to by China.

6. Putting forward and handling of immunity or exemption

6.1 Putting forward immunity or exemption

Where a ship put forward immunity or exemption, it shall provide local MSA with corresponding proof materials. Amongst which, if the ship cannot use fuel oil that meets corresponding requirement until it undergoes conversion to its structure or equipment, it shall provide proof materials such as proof material issued by ship inspection institute, ship's relevant certificates and documents, ship's conversion plan and the completion date of such plan, etc.; where the ship is unable to obtain fuel oil that meets corresponding requirements, it shall, at least 24 hours prior to arrival at port (prior to departure if the voyage is less than 24 hours), report at least the following information to the MSA at the port of destination: basic information of the ship and company, voyage plan, time and place for entering into or leaving from ECA, and it shall also provide evidence proving that it had tried and attempted to purchase fuel oil meeting corresponding regulations, evidence proving that it had tried to find source of alternative fuel oil as well as proof materials that it made plan to obtain fuel oil meeting corresponding regulations.

6.2 Handling of immunity or exemption

MSA shall timely verify the ship that put forward immunity or exemption, if it is true, enforcement of relevant control requirements in the Plan may be suspended temporarily. Once the ship is found not qualified for immunity or exemption, or the any material provided by the ship is false, the ship shall not be granted with immunity or exemption and shall be handled in accordance with corresponding provisions.

7. Information reporting and submission

The MSA that receives malfunction information of ship using fuel oil that does not conform to corresponding provisions and information that the shall is unable to

obtain fuel oil meeting corresponding requirements shall, through MSA directly under P.R. China MSA that such MSA is subordinate to or through local provincial MSA, report and submit on a quarterly basis to P.R China MSA the receiving, investigation and verification situation.

Annex 1

Control Requirement for Sulfur Content of Fuel Oil Used by Ships

Type of ship		ECA			Non-ECA	
		Coastal ECAs		ECAs in inland rivers	Coastal waters	Waters of inland rivers
		Hainan waters	Other waters			
Sea-going ship		As of Jan.1, 2019, $\leq 0.50\%$; As of Jan.1, 2022, $\leq 0.10\%$;	As of Jan.1, 2019, $\leq 0.50\%$; As of Jan.1, 2025, $\leq 0.10\%$ (to be assessed)	As of Jan.1, 2019, $\leq 0.50\%$; As of Jan.1, 2020, $\leq 0.10\%$;	As of Jan.1, 2012, $\leq 3.50\%$; As of Jan.1, 2020, $\leq 0.50\%$;	As of Jan.1, 2012, $\leq 3.50\%$; As of Jan.1, 2020, $\leq 0.50\%$;
Inland river ship	Large inland river ship	---	---	As of Jan.1, 2019, use fuel oil meeting the newly amended standard of Marine Fuel oil.	---	As of Jan.1, 2019, use fuel oil meeting the newly amended standard of Marine Fuel oil.
	Other inland river ship	---	---	As of Jan.1, 2019, use diesel oil meeting national standard for Diesel Oil.	---	use diesel oil meeting national standard for Diesel Oil.
River-sea ship		As of Jan.1, 2019, $\leq 0.50\%$	As of Jan.1, 2019, $\leq 0.50\%$	As of Jan.1, 2019, use fuel oil meeting the newly amended standard of Marine Fuel oil.	As of Jan.1, 2012, $\leq 3.50\%$; As of Jan.1, 2020, $\leq 0.50\%$;	As of Jan.1, 2019, use fuel oil meeting the newly amended standard of Marine Fuel oil.

Control Requirement for Ship NOx

Type of ship		ECA			Non-ECA
		Coastal ECAs		ECAs in inland rivers	
		Hainan waters	Other waters		
Ship engaged in international voyage		On or after Jan.1, 2000, power above 130kw, ≤limit value of international stage-1 On or after Jan.1, 2011, power above 130kw, ≤limit value of international stage-2			
Ship engaged in domestic voyage	Chinese ship	On or after March 1, 2015, power above 130kw, ≤limit value of international stage-2; On or after Jan 1, 2022, displacement as 30L or above, ≤limit value of international stage-3.	On or after March 1, 2015, power above 130kw, ≤limit value of international stage-2; On or after Jan 1, 2025, displacement as 30L or above, ≤limit value of international stage-3 (to be assessed).	On or after March 1, 2015, power above 130kw, ≤limit value of international stage-2; On or after Jan 1, 2022, displacement as 30L or above, ≤limit value of international stage-3.	On or after March 1, 2015, power above 130kw, ≤limit value of international stage-2;
	Foreign ship	---			

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

_____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	<input type="checkbox"/> 国际船舶 <input type="checkbox"/> 沿海船舶 <input type="checkbox"/> 内河船舶		
规格等级 Product Grade	<input type="checkbox"/> 柴油 Diesel Oil <input type="checkbox"/> 180#RMG <input type="checkbox"/> 380#RMK <input type="checkbox"/> 500#RMK <input type="checkbox"/> 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.			

Annex 4**Report Form for Immunity or Exemption**

Ship name:	Nationality/ port of registry:
Gross tonnage:	IMO No./ Identification No.:
Type of ship:	Date of construction:
Last port:	Next port:
Owner:	Operator:
Berthing dock:	Date and time of berth:
Agency company:	
Reasons:	
List of evidential materials:	
Date: (seal)	

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剂连续监测系统,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,记录的洗涤剂 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,可进一步对洗涤剂进行取样送检,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剂。

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	<input type="checkbox"/> 国际船舶 <input type="checkbox"/> 沿海船舶 <input type="checkbox"/> 内河船舶		
规格等级 Product Grade	<input type="checkbox"/> 柴油 Diesel Oil <input type="checkbox"/> 180#RMG <input type="checkbox"/> 380#RMK <input type="checkbox"/> 500#RMK <input type="checkbox"/> 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
