



TECHNICAL CIRCULAR

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TO SHIP OWNER/SHIP MANAGER/INTERESTED PARTIES

Guidelines for the Use of Electronic Record Books (ERBs) under MARPOL

Ship Owners and Managers are advised that from 01 October 2020, IMO had adopted amendments to MARPOL Annexes I, II, V, VI and the NOx Technical Code will enter into force, enabling the use of Electronic Record Books (ERBs) in lieu of paper record books.

Ships Classification Malaysia (SCM) had been authorized to issue a "declaration of MARPOL electronic record book" as mentioned in MEPC.312(74) - Guidelines for the use of electronic record books under MARPOL on behalf of the Marine Department of Malaysia.

ERBs could be a device, system or software application designed to facilitate accurate entries for discharges, transfers, and other operations into an efficient electronic format, while complying with International Conventions and Flag State requirements. With these amendments in force, it is expected that the burden associated with paperwork will be reduced.

The IMO guidelines apply to the use of electronic record books on board to meet the requirements of the following record books:

- a) Oil Record Book, parts I and II (MARPOL Annex I, regulations 17.1 and 36.1)
- b) Cargo Record Book (MARPOL Annex II, regulation 15.1)
- c) Garbage Record Book, parts I and II (MARPOL Annex V, regulation 10.3)
- d) Ozone-depleting Substances (ODS) Record Book (MARPOL Annex VI, regulation 12.6)
- e) Recording of the tier and on/off status of marine diesel engines (MARPOL Annex VI, regulation 13.5.3)
- f) Record of Fuel Oil Changeover (MARPOL Annex VI, regulation 14.6)
- g) Record Book of Engine Parameters (NOX Technical Code, paragraph 6.2.2.7)

Guidelines for the use of electronic record books are provided in the attached IMO Resolution MEPC.312(74). Details of the amendments are provided in the attached IMO Resolutions MEPC.314(74), MEPC.316(74), and MEPC.317(74).

When the ERBs is proposed to be used on board a ship as an alternative to the official hard copy record book, the Flag State has to assess and issue a 'Declaration of MARPOL Electronic Record Book(s)'. This declaration must be kept on board for presentation to authorised officials when requested. The procedures related to the use of ERBs must be documented in the Safety Management System (SMS).

With regards to PSC inspections of electronic records, MEPC.312(74) states that;

'It is recommended that if a ship cannot produce the electronic record book or a declaration provided by the Administration during the PSC inspection, the PSC officer should request to view an alternative verified copy of the records or a hard copy record book for verification'.

To comply with MARPOL requirements, an ERBs should have the capability to retain all records made for the minimum period as specified in each Annex of MARPOL. The capability to produce a hard copy of verified records for the master to certify as a true copy, upon request from relevant authorities, should also be provided.

It is essential to understand that the use of MARPOL ERBs or other electronic logbook systems does not lessen the responsibility to accurately record, maintain, and produce records during an inspection per international requirements. As such, it is recommended that all shipboard records and logs are maintained accurately and in a timely manner.

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ANNEX 15

**RESOLUTION MEPC.321(74)
(adopted on 17 May 2019)**

**2019 GUIDELINES FOR PORT STATE CONTROL
UNDER MARPOL ANNEX VI CHAPTER 3**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by the international conventions for the prevention and control of marine pollution,

RECALLING ALSO that, at its fifty-eighth session, the Committee adopted, by resolution MEPC.176(58), a revised MARPOL Annex VI which significantly strengthens the controls on emissions,

NOTING that articles 5 and 6 of the MARPOL Convention and regulations 10 and 11 of MARPOL Annex VI provide control procedures to be followed by a Party to the 1997 Protocol with regard to foreign ships visiting its ports,

RECALLING that, at its fifty-ninth session, the Committee adopted, by resolution MEPC.181(59), *2009 Guidelines for port State control under the revised MARPOL Annex VI*,

NOTING that the revised MARPOL Annex VI entered into force on 1 July 2010 and since then there have been several amendments to the provisions,

RECOGNIZING the need to revise the *2009 Guidelines for port State control under the revised MARPOL Annex VI*, in accordance with provisions of the MARPOL Annex VI, as amended,

HAVING CONSIDERED, at its seventy-fourth session, draft 2019 Guidelines for port State control under MARPOL Annex VI prepared by the Sub-Committee on Pollution Prevention and Response, at its sixth session, following a review by the Sub-Committee on Implementation of IMO Instruments, at its fifth session,

1 ADOPTS the *2019 Guidelines for port State control under MARPOL Annex VI Chapter 3* (2019 PSC Guidelines), as set out in the annex to the present resolution;

2 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the 2019 PSC Guidelines from 1 January 2020;

3 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the provisions of MARPOL Annex VI concerning the prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship from 1 March 2020;

4 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the provisions of MARPOL Annex VI concerning electronic record books from 1 October 2020;

5 AGREES to keep these Guidelines under review in the light of experience gained with their application;

6 REVOKES the *2009 Guidelines for port State control under the revised MARPOL Annex VI* adopted by resolution MEPC.181(59), from 1 January 2020.

ANNEX

2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI CHAPTER 3

Chapter 1 GENERAL

1.1 This document is intended to provide basic guidance on the conduct of port State control inspections for compliance with MARPOL Annex VI (hereinafter referred to as "the Annex") and afford consistency in the conduct of these inspections, the recognition of deficiencies and the application of control procedures.

1.2 Chapters 1 (General), 4 (Contravention and detention), 5 (Reporting requirements) and 6 (Review procedures) of the *Procedures for Port State Control*, as adopted by the Organization, as may be amended, also applies to these Guidelines.

Chapter 2 INSPECTIONS OF SHIPS REQUIRED TO CARRY THE IAPP CERTIFICATE

2.1 Initial inspections

2.1.1 The PSCO should ascertain the date of ship construction and the date of installation of equipment on board which are subject to the provisions of the Annex, in order to confirm which regulations of the Annex are applicable.

2.1.2 On boarding and introduction to the master or responsible ship's officer, the port State control officer (PSCO) should examine the following documents, where applicable:

- .1 the International Air Pollution Prevention Certificate (IAPP Certificate) (regulation VI/6), including its Supplement;
- .2 the Engine International Air Pollution Prevention Certificate (EIAPP Certificate) (paragraph 2.2 of the NO_x Technical Code) including its Supplement, for each applicable marine diesel engine;
- .3 the Technical File (paragraph 2.3.4 of the NO_x Technical Code) for each applicable marine diesel engine;
- .4 depending on the method used for demonstrating NO_x compliance for each applicable marine diesel engine:
 - .1 the Record Book of Engine Parameters for each marine diesel engine (paragraph 6.2.2.7 of the NO_x Technical Code) demonstrating compliance with regulation VI/13 by means of the marine diesel engine parameter check method; or
 - .2 documentation relating to the simplified measurement method; or
 - .3 documentation related to the direct measurement and monitoring method;
- .5 for a ship to which regulation VI/13.5.1 applies for a particular NO_x Tier III emission control area and that has one or more installed marine diesel engines certified to both Tier II and Tier III or which has one or more marine diesel

engines certified to Tier II only¹ that there are the required log book and the recordings for the tier and on/off status of those marine diesel engines while the ship is within an applicable NO_x Tier III emission control area;

- .6 the Approved Method File (regulation VI/13.7);
- .7 the written procedures covering fuel oil change over operations (in a working language or languages understood by the crew) where separate fuel oils are used in order to achieve compliance (regulation VI/14.6);
- .8 the approved documentation relating to exceptions and/or exemptions granted under regulation VI/3;
- .9 the approved documentation (SECC where issued, ETM, OMM, SECP) and relating to any installed Exhaust Gas Cleaning System (EGCS) or equivalent means, to reduce SO_x emissions (regulation VI/4);
- .10 that the required EGCS monitoring records have been retained and show compliance. Additionally, that the EGCS Record Book including nitrate discharge data and performance records,² or approved alternative, has been duly maintained;
- .11 the bunker delivery notes (BDNs) and representative samples or records thereof (regulation VI/18);
- .12 the copy of the type approval certificate of applicable shipboard incinerator (resolutions MEPC.76(40) or MEPC.244(66));
- .13 the Ozone Depleting Substances Record Book (regulation VI/12.6);
- .14 the VOC Management Plan (regulation VI/15.6);
- .15 any notification to the ship's flag Administration issued by the master or officer in charge of the bunker operation together with any available commercial documentation relevant to non-compliant bunker delivery, regulation VI/18.2; and
- .16 if the ship has not been able to obtain compliant fuel oil, the notification to the ship's flag Administration and the competent authority of the relevant port of destination as set out in the appendix.

The Record Books referenced in sub-paragraphs .1, .5, .10 and 13 above may be presented in an electronic format. A declaration from the Administration should be viewed in order to accept this Electronic Record Book. If a declaration cannot be provided, a hard copy Record Book will need to be presented for examination.

¹ Unified Interpretation to regulation 13.5.3 set out in MEPC.1/Circ.795/Rev.4.

² In assessing the Emission Ratio and discharge water records the PSCO should be mindful that such factors as transient engine operation or analyser performance outputs may result in isolated "spikes" in the recorded output which, while these measurements in themselves may be above the required Emission Ratio or discharge water limit values, do not indicate that overall the EGCS was not being operated and controlled as required and hence should not be taken as evidence of non-compliance with the requirements.

2.1.3 As a preliminary check, the IAPP Certificate's validity should be confirmed by verifying that the Certificate is properly completed and signed and that required surveys have been performed.

2.1.4 Through examining the Supplement to the IAPP Certificate, the PSCO may establish how the ship is equipped for the prevention of air pollution.

2.1.5 In the case where the bunker delivery note or the representative sample as required by regulation VI/18 presented to the ship are not in compliance with the relevant requirements (the BDN is set out in appendix V of MARPOL Annex VI), the master or officer in charge of the bunker operation may have documented that through a Notification to the ship's flag Administration with copies to the port authority under whose jurisdiction the ship did not receive the required documentation pursuant to the bunkering operation and to the bunker deliverer.

2.1.6 In addition, if the BDN shows compliant fuel, but the master has independent test results of the fuel oil sample taken by the ship during the bunkering which indicates non-compliance, the master may have documented that through a Notification to the ship's flag Administration with copies to the competent authority of the relevant port of destination, the Administration under whose jurisdiction the bunker deliverer is located and to the bunker deliverer.

2.1.7 In all cases, a copy may be retained on board the ship, together with any available commercial documentation, for the subsequent scrutiny of port State control.

2.2 Initial inspection on ships equipped with equivalent means of SO_x compliance.

2.2.1 On ships equipped with equivalent means of compliance, the PSCO will look at:

- .1 evidence that the ship has received an appropriate approval for any installed equivalent means (approved, under trial or being commissioned);
- .2 evidence that the ship is using an equivalent means, as identified on the Supplement of the IAPP certificate, for fuel oil combustion units on board or that compliant fuel oil is used in equipment not so covered; and
- .3 BDNs on board³ which indicate that the fuel oil is intended to be used in combination with an equivalent means of SO_x compliance or the ship is subject to a relevant exemption to conduct trials for SO_x emission reduction and control technology research.

2.2.2 In the case where an EGCS is not in compliance with the relevant requirements for other than transitory periods and isolated spikes in the recorded output, the master or officer in charge may have documented that through a Notification to the ship's flag Administration with copies to the competent authority of the relevant port of destination, and present those corrective actions taken in order to rectify the situation in accordance with the guidance given in the EGCS Technical Manual. If a malfunction occurs in the instrumentation for the monitoring of emission to air or the monitoring of washwater discharge to sea, the ship may have alternative documentation demonstrating compliance.⁴

³ Resolution MEPC.305(73) *Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship* is not applicable to fuel oil carried as cargo or for ships fitted with an approved equivalent means of compliance.

⁴ MEPC.1/Circ.883 on *Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the Exhaust Gas Cleaning Systems (EGCS) fails to meet the provisions of the 2015 EGCS Guidelines (resolution MEPC.259(68))*, ships should have documented notification of system non-compliance to relevant authorities as in paragraph 2.2.2.

2.3 Initial inspection within an ECA

2.3.1 When a ship is inspected in a port in an ECA designated for SO_x emission control, the PSCO should look at:

- .1 evidence of fuel oil delivered to and used on board with a sulphur content of not more than 0.10% m/m through the BDNs and appropriate onboard records including records of bunkering operations as set out in the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4); and
- .2 for those ships using separate fuel oils for compliance with regulation VI/14, evidence of a written procedure (in a working language or languages understood by the crew) and records of changeover to fuel oil with a sulphur content of not more than 0.10% m/m before entering the ECA such that compliant fuel was being used while sailing in the entire ECA as required in regulation VI/14.6.

2.3.2 When a ship to which regulation VI/13.5.1 applies for a particular NO_x Tier III emission control area is inspected in a port in that area, the PSCO should look at:

- .1 the records in respect of the tier and on/off status, together with any changes to that status while within that NO_x Tier III emission control area, which are to be logged as required by regulation VI/13.5.3 in respect of an installed marine diesel engine certified to both Tier II and Tier III or which is certified to Tier II only⁵; and
- .2 the status of an installed marine diesel engine which is certified to both Tier II and Tier III showing that that engine was operating in its Tier III condition on entry into that NO_x Tier III emission control area and that status was maintained at all times while that marine diesel engine was in operation within that area; or
- .3 the records related to the conditions associated with an exemption granted under regulation VI/13.5.4 have been logged as required by that exemption and that the terms and duration of that exemption have been complied with as required.

2.4 Initial inspection outside an ECA or first port after transiting an ECA

2.4.1 When a ship is inspected in a port outside ECA the PSCO will look to the same documentation and evidence as during inspections in ports inside the ECA. The PSCO should in particular look at:

- .1 evidence that the sulphur content of the fuel oil is in accordance with regulation VI/14.1⁶ through the BDNs and appropriate onboard records including records of bunkering operations as set out in the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4); and

⁵ Unified Interpretation to regulation 13.5.3 set out in MEPC.1/Circ.795/Rev.4.

⁶ Resolution MEPC.305(73) *Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship* is not applicable to fuel oil carried as cargo or for ships fitted with an approved equivalent means of compliance.

- .2 evidence of a written procedure (in a working language or languages understood by the crew) and records of changeover from fuel oil with a sulphur content of not more than 0.10% m/m after leaving the ECA such that compliant fuel was being used while sailing in the in the entire ECA.

2.4.2 When a ship to which regulation VI/13.5.1 applies for a particular NO_x Tier III emission control area is inspected in a port outside that area, the PSCO should look at the records required by 2.3.2.1 and 2.3.2.2 or 2.3.2.3 to ensure that the relevant requirements were complied with for the whole period of time the ship was operating in that area.

2.5 Outcome of initial inspection

2.5.1 If the certificates and documents are valid and appropriate and, after an inspection of the ship to check that the overall condition of the ship meets generally accepted international rules and standards, the PSCO's general impressions and observations on board confirm a good standard of maintenance, the inspection should be considered satisfactorily concluded.

2.5.2 If, however, the PSCO's general impressions or observations on board give clear grounds (see paragraph 2.5.3) for believing that the condition of the ship or its equipment do not correspond substantially with the particulars of the certificates or the documents, the PSCO should proceed to a more detailed inspection.

2.5.3 "Clear grounds" to conduct a more detailed inspection include:

- .1 evidence that certificates required by the Annex are missing or clearly invalid;
- .2 evidence that documents required by the Annex are missing or clearly invalid;
- .3 the absence or malfunctioning of equipment or arrangements specified in the certificates or documents;
- .4 the presence of equipment or arrangements not specified in the certificates or documents;
- .5 evidence from the PSCO's general impressions or observations that serious deficiencies exist in the equipment or arrangements specified in the certificates or documents;
- .6 information or evidence that the master or crew are not familiar with essential shipboard operations relating to the prevention of air pollution, or that such operations have not been carried out;
- .7 evidence of inconsistency between information in the bunker delivery note and paragraph 2.3 of the Supplement to the IAPP certificate;
- .8 evidence that an equivalent means has not been used as required; or
- .9 evidence, for example by fuel calculators, that the quantity of bunkered compliant fuel oil is inconsistent with the ship's voyage plan; and

- .10 receipt of a report or complaint containing information that the ship appears to be non-compliant including but not limited to information from remote sensing surveillance of SO_x emissions or portable fuel oil sulphur content measurement devices indicating that a ship appears to use non-compliant fuel while in operation/underway;
- .11 evidence that the tier and/or on/off status of applicable installed marine diesel engines has not been maintained correctly or as required;
- .12 receipt of a report or complaint containing information that one or more of the installed marine diesel engines has not been operated in accordance with the provisions of the respective Technical File or the requirements relevant to a particular NO_x Tier III emission control area; and
- .13 receipt of a report or complaint containing information that the conditions attached to an exemption granted under regulation VI/13.5.4 have not been complied with.

2.6 More detailed inspections

2.6.1 The PSCO should verify that:

- .1 there are effectively implemented maintenance procedures for the equipment containing ozone-depleting substances; and
- .2 there are no deliberate emissions of ozone-depleting substances.

2.6.2 In order to verify that each installed marine diesel engine with a power output of more than 130 kW is approved by the Administration in accordance with the NO_x Technical Code and maintained appropriately, the PSCO should pay particular attention to the following:

- .1 examine such marine diesel engines to be consistent with the EIAPP Certificate and its Supplement, Technical File and, if applicable, Record Book of Engine Parameters or Onboard Monitoring Manual and related data;
- .2 examine marine diesel engines specified in the Technical Files to verify that no unapproved modifications, which may affect NO_x emission, have been made to the marine diesel engines;
- .3 in the case of an installed marine diesel engine certified to Tier III that the required records, if applicable, in accordance with regulation VI/13.5.3 or in the Technical File, including those required by 2.3.6 of the NO_x Technical Code, have been maintained as necessary and that the marine diesel engine, including any NO_x control device and associated ancillary systems and equipment, including, where fitted, bypass arrangements, is maintained in accordance with the associated Technical File and is in good order;
- .4 if applicable, examine whether the conditions attached to an exemption granted under regulation VI/13.5.4 have been complied with as required;
- .5 examine marine diesel engines with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 to verify that they are certified, if so required, in accordance with regulation VI/13.7;

- .6 in the case of ships constructed before 1 January 2000, verify that any marine diesel engine which has been subject to a major conversion, as defined in regulation VI/13, has been approved by the Administration; and
- .7 emergency marine diesel engines intended to be used solely in case of emergency are still in use for this purpose.

2.6.3 The PSCO should check and verify whether fuel oil complies with the provisions of regulation VI/14 taking into account appendix VI⁷ of this Annex.

2.6.4 The PSCO should pay attention to the record required in regulation VI/14.6 in order to identify the sulphur content of fuel oil used by the ship depending on the area of trade, or that other equivalent approved means have been applied as required. The fuel oil consumed in and outside the ECA, and that there is enough fuel in compliance with regulation VI/14 to reach the next port destination.

2.6.5 Where EGCS is used, the PSCO should check that it has been installed and operated, together with its monitoring systems, in accordance with the associated approved documentation according to the survey procedures as established in the OMM.

2.6.6 If the ship is equipped with an EGCS as an equivalent means of SO_x compliance, the PSCO should verify that the system is properly functioning, is in operation, there are continuous-monitoring systems with tamper-proof data recording and processing devices,⁸ if applicable and the records demonstrate the necessary compliance when set against the limits given in the approved documentation and applies to relevant fuel combustion units on board. Checking can include but is not limited to: emissions ratio, pH, PAH, turbidity readings as limit values given in ETM-A or ETM-B and operation parameters as listed in the system documentation.

2.6.7 If the ship is a tanker, as defined in regulation VI/2.21, the PSCO should verify that the vapour collection system approved by the Administration, taking into account MSC/Circ.585, is installed, if required under regulation VI/15.

2.6.8 If the ship is a tanker carrying crude oil, the PSCO should verify that there is on board an approved VOC Management Plan.

2.6.9 The PSCO should verify that prohibited materials are not incinerated.

2.6.10 The PSCO should verify that shipboard incineration of sewage sludge or sludge oil in boilers or marine power plants is not undertaken while the ship is inside ports, harbours or estuaries (regulation VI/16.4).

2.6.11 The PSCO should verify that the shipboard incinerator, if required by regulation VI/16.6.1, is approved by the Administration. For these units, it should be verified that the incinerator is properly maintained, therefore the PSCO should examine whether:

- .1 the shipboard incinerator is consistent with the certificate of shipboard incinerator;

⁷ Amendments to MARPOL VI, Appendix VI, *Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8)*, expected to be adopted in Spring 2020 and set out in annex 13 to document MEPC 74/18/Add.1.

⁸ Equivalent emission values for emission abatement methods are 4.3 and 21.7 SO₂ (ppm)/CO₂ (% v/v) for marine fuels with a sulphur content of 0.10 and 0.50 (% m/m) respectively.

- .2 the operational manual, in order to operate the shipboard incinerator within the limits provided in appendix IV to the Annex, is provided; and
- .3 the combustion chamber flue gas outlet temperature is monitored at all times the unit is in operation (regulation VI/16.9).

2.6.12 If there are clear grounds as defined in paragraph 2.5.3, the PSCO may examine operational procedures by confirming that:

- .1 the master or crew are familiar with the procedures to prevent emissions of ozone-depleting substances;
- .2 the master or crew are familiar with the proper operation and maintenance of marine diesel engines, in accordance with their Technical Files or Approved Method file, as applicable, and with due regard for Emission Control Areas for NO_x control;
- .3 the master or crew are familiar with fuel oil bunkering procedures in connection to the respective bunker delivery notes and onboard records including the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4) and retained samples as required by regulation VI/18;
- .4 the master or crew are familiar with the correct operation of an EGCS or other equivalent means on board together with any applicable monitoring and recording, and record keeping requirements;
- .5 the master or crew are familiar and have undertaken the necessary fuel oil changeover procedures, or equivalent, associated with demonstrating compliance within an Emission Control Area;
- .6 the master or crew are familiar with the garbage screening procedure to ensure that prohibited garbage is not incinerated;
- .7 the master or crew are familiar with the operation of the shipboard incinerator, as required by regulation VI/16.6, within the limits provided in appendix IV to the Annex, in accordance with its operational manual;
- .8 the master or crew are familiar with the regulation of emissions of VOCs, when the ship is in ports or terminals under the jurisdiction of a Party to the 1997 Protocol to MARPOL 73/78 in which VOCs emissions are to be regulated, and are familiar with the proper operation of a vapour collection system approved by the Administration (in case the ship is a tanker as defined in regulation VI/2.21); and
- .9 the master or crew are familiar with the application of the VOC Management Plan, if applicable.

2.7 Detainable deficiencies

2.7.1 In exercising his/her functions, the PSCO should use professional judgment to determine whether to detain the ship until any noted deficiencies are corrected or to allow it to sail with certain deficiencies which do not pose an unreasonable threat of harm under the scope of the Annex provided they will be timely addressed. In doing this, the PSCO should be guided by the principle that the requirements contained in the Annex, with respect to the construction, equipment and operation of the ship, are essential for the protection of the marine

environment, the navigational safety or the human health and that departure from these requirements could constitute an unreasonable threat of harm to the mentioned protection aspects and should be avoided.

2.7.2 In order to assist the PSCO in the use of these Guidelines, there follows a list of deficiencies, which are considered, taking into account the provisions of regulation VI/3, to be of such a serious nature that they may warrant the detention of the ship involved:

- .1 absence of valid IAPP Certificate, EIAPP Certificates or Technical Files, if applicable;
- .2 a marine diesel engine, with a power output of more than 130 kW, which is installed on board a ship constructed on or after 1 January 2000, or a marine diesel engine having undergone a major conversion on or after 1 January 2000, which does not conform to its Technical File, or where the required records have not been maintained as necessary or where it has not met the applicable requirements of the particular NO_x Tier III emission control area in which it is operating;
- .3 a marine diesel engine, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres, which is installed on board a ship constructed on or after 1 January 1990 but prior to 1 January 2000, and an approved method for that engine has been certified by an Administration and was commercially available, for which an approved method is not installed after the first renewal survey specified in regulation VI/13.7.2;
- .4 on ships not equipped with equivalent means of SO_x compliance, based on the methodology of sample analysis in accordance with appendix VI⁹ of MARPOL Annex VI, the sulphur content of any fuel oil being used or carried for use on board exceeds the applicable limit required by regulation VI/14. If the master claims that it was not possible to bunker compliant fuel oil, the PSCO should take into account the provisions of regulation VI/18.2 (see the appendix).
- .5 on ships equipped with equivalent means of SO_x compliance, absence of an appropriate approval for the equivalent means, which applies to relevant fuel combustion units on board. With regard to combustion units not connected to an EGCS, the sulphur content of any fuel oil being used on these combustion units exceeds the limits stipulated in regulation VI/14, taking into account the provisions of regulation VI/18.2 (see the appendix).
- .6 non-compliance with the relevant requirements while operating within an Emission Control Area for SO_x and particulate matter control;
- .7 an incinerator installed on board the ship on or after 1 January 2000 does not comply with requirements contained in appendix IV to the Annex, or the standard specifications for shipboard incinerators developed by the Organization (resolutions MEPC.76(40) and MEPC.244(66)); and

⁹ Amendments to MARPOL VI, appendix VI, Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8), expected to be adopted in Spring 2020 and set out in annex13 to document MEPC 74/18/Add.1.

- .8 the master or crew are not familiar with essential procedures regarding the operation of air pollution prevention equipment as defined in paragraph 2.5.12 above.

Chapter 3 INSPECTIONS OF SHIPS OF NON-PARTIES TO THE ANNEX AND OTHER SHIPS NOT REQUIRED TO CARRY THE IAPP CERTIFICATE

3.1 As this category of ships is not provided with the IAPP Certificate, the PSCO should judge whether the condition of the ship and its equipment satisfies the requirements set out in the Annex. In this respect, the PSCO should take into account that, in accordance with article 5(4) of the MARPOL Convention, no more favourable treatment is to be given to ships of non-Parties.

3.2 In all other respects the PSCO should be guided by the procedures for ships referred to in chapter 2 and should be satisfied that the ship and crew do not present a danger to those on board or an unreasonable threat of harm to the marine environment.

3.3 If the ship has a form of certification other than the IAPP Certificate, the PSCO may take such documentation into account in the evaluation of the ship.

APPENDIX

NON-AVAILABILITY OF COMPLIANT FUEL OIL CLAIMED

In case non-availability of compliant fuel oil is claimed the master/owner must present a record of actions taken to attempt to bunker compliant fuel oil and provide evidence:

- .1 of attempts to purchase compliant fuel oil in accordance with its voyage plan;
- .2 if the fuel oil was not made available where expected, that attempts were made to locate alternative sources for such fuel oil; and
- .3 that despite best efforts to obtain compliant fuel oil no such fuel oil was made available for purchase.

Best efforts to procure compliant fuel oil include, but are not limited to, investigating alternative sources of fuel oil prior to commencing the voyage or en route.

The ship should not be required to deviate from its intended voyage or to unduly delay the voyage in order to achieve compliance.

If the ship provides the information, as above, the port State should take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

The master/owner may provide evidence as below to support their claim (not exhaustive):

- .1 a copy (or description) of the ship's voyage plan, including the ship's port of origin and port of destination;
- .2 the time the ship first received notice it would be conducting a voyage involving transit/arrival in the port and the ship's location when it first received such notice;
- .3 a description of the actions taken to attempt to achieve compliance, including a description of all attempts that were made to locate alternative sources of compliant fuel oil, and a description of the reason why compliant fuel was not available (e.g. compliant fuel oil was not available at ports on the "intended voyage", fuel oil supply disruptions at port, etc.);
- .4 the cost of compliant fuel is not considered to be a valid basis for claiming non-availability of fuel;
- .5 include names and addresses of the fuel oil suppliers contacted and the dates on which contact was made;
- .6 in cases of fuel oil supply disruption, the name of the port at which the ship was scheduled to receive compliant fuel oil and the name of the fuel supplier that is reporting the non-availability of compliant fuel oil;
- .7 the availability of compliant fuel oil at the next port-of-call and plans to obtain that fuel oil; and

- .8 if applicable, identify and describe any operational constraints that prevented use of compliant fuel oil, e.g. with respect to viscosity or other fuel oil parameters.

If, despite best efforts, it was not possible to procure compliant fuel oil the master/owner must notify the port State control authorities in the port of arrival and the flag Administration (regulation VI/18.2.4).

ANNEX 3**RESOLUTION MEPC.314(74)
(adopted on 17 May 2019)****AMENDMENTS TO THE ANNEX OF THE INTERNATIONAL CONVENTION FOR THE
PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE
PROTOCOL OF 1978 RELATING THERETO****Amendments to MARPOL Annexes I, II and V****(Electronic Record Books)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering and adopting amendments thereto,

HAVING CONSIDERED, at its seventy-fourth session, proposed amendments to MARPOL Annexes I, II and V concerning Electronic Record Books, which were circulated in accordance with article 16(2)(a) of MARPOL,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annexes I, II and V, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 April 2020 unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 October 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

5 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEXES I, II AND V

(Electronic Record Books)

MARPOL ANNEX I

REGULATIONS FOR THE PREVENTION OF POLLUTION BY OIL

Regulation 1 – Definitions

- 1 A new paragraph 39 is added as follows:

"39 *Electronic Record Book* means a device or system, approved by the Administration, used to electronically record the required entries for discharges, transfers and other operations as required under this Annex in lieu of a hard copy record book."

Regulation 17 – Oil Record Book Part I – Machinery space operations

- 2 The second sentence of paragraph 1 is replaced by the following:

"The Oil Record Book, whether as a part of the ship's official logbook, as an electronic record book which shall be approved by the Administration taking into account the Guidelines developed by the Organization*, or otherwise, shall be in the form specified in appendix III to this Annex."

- 3 In the second sentence of paragraph 4, the words "or group of electronic entries" are inserted after the words "each completed page".

Regulation 36 – Oil Record Book Part II – Cargo/ballast operations

- 4 The second sentence of paragraph 1 is replaced by the following:

"The Oil Record Book Part II, whether as a part of the ship's official logbook, as an electronic record book which shall be approved by the Administration taking into account the Guidelines developed by the Organization*, or otherwise, shall be in the Form specified in appendix III to this Annex."

- 5 In the second sentence of paragraph 5, the words "or group of electronic entries" are inserted after the words "each completed page".

* Refer to the *Guidelines for the use of electronic record books under MARPOL*, adopted by resolution MEPC.312(74)"

MARPOL ANNEX II

REGULATIONS FOR THE CONTROL OF POLLUTION OF NOXIOUS LIQUID SUBSTANCES IN BULK

Regulation 1 – Definitions

6 A new paragraph 22 is added as follows:

"22 *Electronic Record Book* means a device or system, approved by the Administration, used to electronically record the required entries for discharges, transfers and other operations as required under this Annex in lieu of a hard copy record book."

Regulation 15 – Cargo Record Book

7 The existing paragraph 1 is replaced by the following:

"Every ship to which this Annex applies shall be provided with a Cargo Record Book, whether as a part of the ship's official logbook, as an electronic record book which shall be approved by the Administration taking into account Guidelines developed by the Organization*, or otherwise, in the form specified in appendix II to this Annex."

8 In the first sentence of paragraph 4, the words "or group of electronic entries" are inserted after the words "each page".

MARPOL ANNEX V

REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS

Regulation 1 – Definitions

9 A new paragraph 19 is added as follows:

"19 *Electronic Record Book* means a device or system, approved by the Administration, used to electronically record the required entries for discharges, transfers and other operations as required under this Annex in lieu of a hard copy record book."

Regulation 10 – Placards, garbage management plans and garbage record-keeping

10 The second sentence of the chapeau of paragraph 3 is replaced by the following:

"The Garbage Record Book, whether as a part of the ship's official logbook, or as an electronic record book which shall be approved by the Administration taking into account the Guidelines developed by the Organization*, or otherwise, shall be in the form specified in appendix II to this Annex:"

11 In the second sentence of paragraph 3.1, the words "or group of electronic entries" are inserted after the words "each completed page".

* Refer to the *Guidelines for the use of electronic record books under MARPOL*, adopted by resolution MEPC.312(74)"

ANNEX 5

**RESOLUTION MEPC.316(74)
(adopted on 17 May 2019)**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS,
1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO**

Amendments to MARPOL Annex VI

(Electronic Record Books and EEDI regulations for ice-strengthened ships)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its seventy-fourth session, proposed amendments to MARPOL Annex VI concerning Electronic Record Books and EEDI regulations for ice-strengthened ships, which were circulated in accordance with article 16(2)(a) of MARPOL,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annex VI, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 April 2020 unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 October 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

5 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI

(Electronic Record Books and EEDI regulations for ice-strengthened ships)

Regulation 2 – Definitions

- 1 Paragraph 42 is replaced by the following:

"42 *Polar Code* means the International Code for Ships Operating in Polar Waters, consisting of an introduction, parts I-A and II-A and parts I-B and II-B, adopted by resolutions MSC.385(94) and MEPC.264(68), as may be amended, provided that:

- .1 amendments to the environment-related provisions of the introduction and chapter 1 of part II-A of the Polar Code are adopted, brought into force and take effect in accordance with the provisions of article 16 of the present Convention concerning the amendment procedures applicable to an appendix to an annex; and
- .2 amendments to part II-B of the Polar Code are adopted by the Marine Environment Protection Committee in accordance with its Rules of Procedure."

- 2 A new paragraph 51 is added as follows:

"51 *Electronic Record Book* means a device or system, approved by the Administration, used to electronically record the required entries for discharges, transfers and other operations as required under this Annex in lieu of a hard copy record book."

Regulation 12 – Ozone-depleting substances

- 3 In the second sentence of paragraph 6, the words "recording system" are replaced by "record book".

- 4 A new sentence is inserted at the end of paragraph 6 as follows:

"An electronic recording system referred to in regulation 12.6, as adopted by resolution MEPC.176(58), shall be considered an electronic record book, provided the electronic recording system is approved by the Administration on or before the first International Air Pollution Prevention (IAPP) Certificate renewal survey carried out on or after 1 October 2020, but not later than 1 October 2025, taking into account the Guidelines developed by the Organization"

Regulation 13 – Nitrogen oxides (NO_x)

- 5 In paragraph 5.3, the words "or electronic record book*", " are inserted after the words "shall be recorded in such logbook".

*" Refer to the *Guidelines for the use of electronic record books under MARPOL*, adopted by resolution MEPC.312(74)."

Regulation 14 – Sulphur oxides (SO_x) and particulate matter

6 In the last sentence of paragraph 6, the words "or electronic record book*," are inserted after the words "shall be recorded in such logbook".

Regulation 19 – Application

7 In the last sentence of paragraph 3, the words "cargo ships having ice-breaking capability" are replaced by the words "category A ships as defined in the Polar Code".

Appendix I

Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

8 In the introductory paragraph of Appendix I, the words "by resolution MEPC.176(58) in 2008" are deleted.

Appendix VIII

Form of International Energy Efficiency (IEE) Certificate

9 In the introductory paragraph, the words "by resolution MEPC.203(62)" are deleted.

Appendix X

Form of Statement of Compliance – Fuel Oil Consumption Reporting

10 In the introductory paragraph, the word "by" between "Pollution" and "Ships" in the first sentence is replaced by the word "from".

* Refer to the *Guidelines for the use of electronic record books under MARPOL*, adopted by resolution MEPC.312(74)."

ANNEX 6

**RESOLUTION MEPC.317(74)
(adopted on 17 May 2019)**

AMENDMENTS TO THE NO_x TECHNICAL CODE 2008

(Electronic Record Books and Certification requirements for SCR systems)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering and adopting amendments thereto,

RECALLING FURTHER regulation 13 of MARPOL Annex VI which makes the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines ("the NO_x Technical Code 2008") mandatory under that Annex,

HAVING CONSIDERED, at its seventy-fourth session, draft amendments to the NO_x Technical Code 2008 related to Electronic Record Books and certification requirements for SCR systems, which were circulated in accordance with article 16(2)(a) of MARPOL,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to the NO_x Technical Code 2008, as set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 April 2020, unless prior to that date not less than one third of the Parties or Parties, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 October 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

5 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to the Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO THE NO_x TECHNICAL CODE 2008

(Electronic Record Books and Certification requirements for SCR systems)

Chapter 1 – General

1.3 Definitions

- 1 A new paragraph 1.3.20 is added as follows:

"1.3.20 *Electronic Record Book* means a device or system, approved by the Administration, used to electronically record the entries required under this Code in lieu of a hard copy record book."

Chapter 2 – Surveys and certification

2.2 Procedures for pre-certification of an engine

- 2 Paragraph 2.2.5.1 is replaced by the following:

".1 Where a NO_x-reducing device is to be included within the EIAPP certification, it must be recognized as a component of the engine, and its presence shall be recorded in the engine's Technical File. The applicable test procedure shall be performed and the combined engine/NO_x-reducing device shall be approved and pre-certified by the Administration taking into account Guidelines developed by the Organization*. However, the pre-certification in accordance with the procedure not involving the testing for the combined engine/NO_x-reducing device on a test bed as given by the Guidelines developed by the Organization is subject to the limitations given in paragraph 2.2.4.2."

Chapter 6 – Procedures for demonstrating compliance with NO_x emission limits on board

6.2.2 Documentation for an engine parameter check method

- 3 In paragraph 6.2.2.7.1, after the words "a record book", the words "or electronic record book**" are inserted.

Appendix I Form of EIAPP Certificate

- 4 In the introductory paragraph, the words "by resolution MEPC.176(58) in 2008" are deleted.

* Refer to the 2017 Guidelines 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) systems, adopted by resolution MEPC.291(71), as amended (resolution MEPC.313(74)).

** Refer to the Guidelines for the use of electronic record books under MARPOL, adopted by resolution MEPC.312(74)."