

REPUBLIC OF THE MARSHALL ISLANDS

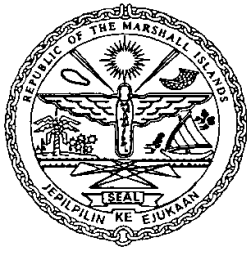


MARPOL Annex VI, Chapter 3 – Requirements for Control of Emissions from Ships

MARITIME ADMINISTRATOR

TABLE OF CONTENTS

PURPOSE	4
APPLICABILITY	5
REQUIREMENTS.....	5
1.0 Chapter 1 – General.....	5
1.1 Exceptions and Exemptions (Regulation 3).....	5
1.2 Equivalents (Regulation 4)	6
2.0 Chapter 2 – Survey, Certification, and Means of Control	7
2.1 Survey and Certification	7
2.2 Recognized Organizations	7
2.3 Master or Shipowner Responsibilities	8
2.4 On-Board Recordkeeping	8
3.0 Chapter 3 - Requirements for Control of Emissions from Ships	9
3.1 Ozone-Depleting Substances - ODS (Regulation 12).....	9
3.2 Nitrogen Oxide Emissions - NO _x (Regulation 13).....	10
3.3 SO _x (Regulation 14)	12
3.4 Volatile Organic Compounds - VOCs (Regulation 15).....	14
3.5 Shipboard Incineration (Regulation 16).....	14
3.6 Fuel Oil Quality (Regulation 18)	14
3.7 Bunker Delivery Notes and Delivered Fuel Oil Samples (Regulation 18).....	15
3.8 Fuel Oil Availability (Regulation 18)	16
Appendix A – Fuel Oil Changeover Plan.....	18
Appendix B – Low Sulphur Fuel Oil Changeover Completion Record.....	19
Appendix C – Compliant Fuel Oil Non-Availability Report (FONAR)	20



**REPUBLIC OF
THE MARSHALL ISLANDS**

MARITIME ADMINISTRATOR

Marine Notice

No. 2-013-8

Rev. Nov/2023

**TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF
MERCHANT SHIPS, AND RECOGNIZED ORGANIZATIONS**

**SUBJECT: MARPOL Annex VI, Chapter 3 – Requirements for Control of Emissions
from Ships**

- References:**
- (a) **MARPOL**, *International Convention for the Prevention of Pollution from Ships*, Consolidated Edition, 2022
 - (b) **NO_x Technical Code 2008 (NTC 2008)**, *Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines*
 - (c) **IMO Resolution [MEPC.307\(73\)](#)**, *2018 Guidelines for the discharge of exhaust gas recirculation (EGR) bleed-off water*, adopted 26 October 2018
 - (d) **IMO Resolution [MEPC.320\(74\)](#)**, *2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI*, adopted 17 May 2019
 - (e) **IMO Resolution [MEPC.340\(77\)](#)**, *2021 Guidelines for exhaust gas cleaning systems*, adopted 26 November 2021
 - (f) **IMO Resolution [MEPC.361\(79\)](#)** *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 (Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter)*, adopted 16 December 2022
 - (g) **IMO Resolution [MEPC.362\(79\)](#)**, *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 (Regional reception facilities within Arctic waters, information to be included in the bunker delivery note (BDN) and information to be submitted to the IMO Ship Fuel Oil Consumption Database)*, adopted 16 December 2022
 - (h) **IMO Circular [MEPC.1/Circ.795/Rev.8](#)**, *Unified interpretation of MARPOL Annex VI*, issued 24 July 2023
 - (i) **IMO Circular [MEPC.1/Circ.864/Rev.1](#)**, *2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships*, issued 21 May 2019
 - (j) **IMO Circular [MEPC.1/Circ.881](#)**, *Guidance for Port State Control on contingency measures for addressing non-compliant fuel oil*, issued 21 May 2019

- (k) **IMO Circular [MEPC.1/Circ.883/Rev.1](#)**, *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 System (EGCS) fails to meet the provisions of the EGCS Guidelines*, issued 15 December 2021
- (l) **IMO Circular [MEPC.1/Circ.889](#)**, *2020 Guidelines for on board sampling of fuel oil intended to be used or carried for use on board a ship*, issued 7 December 2020
- (m) **IMO Circular [MEPC.1/Circ.892](#)**, *Guidelines for exemption of unmanned non-self-propelled (UNSP) barges from the survey and certification requirements under the MARPOL Convention*, issued 9 July 2021
- (n) **IMO Circular [MEPC.1/Circ.895/Rev.1](#)**, *Unified interpretations to the NO_x Technical Code 2008, as amended*, issued 10 June 2022
- (o) **IMO Circular [MEPC.1/Circ.900](#)**, *2022 Guidance regarding the delivery of EGCS residues to port reception facilities*, issued 10 June 2022
- (p) **RMI Marine Notice [2-011-51](#)**, *International Code of Safety for Ships Using Gases or Other Low-Flashpoint Fuels (IGF Code)*
- (q) **RMI Marine Guideline [2-13-6](#)**, *Guidance on the Application of Regulation 13 of MARPOL Annex VI Tier III Requirements to Dual Fuel and Gas-Fueled Engines*
- (r) **RMI [Yacht Technical Circular No. 9](#)**, *Issuance of IMO Compliant Engine International Air Pollution Prevention Certificates by Recognized Organizations Based Upon EIAPP Certificates Issued by United States Environmental Protection Agency*

PURPOSE

This Marine Notice (MN) clarifies the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, Chapter 3, air emissions requirements for Republic of the Marshall Islands (RMI)-flagged ships.

This MN, which supersedes Rev. Oct/2022, includes the following new requirements that will enter into force on or after 1 May 2024:

- Amendments to MARPOL Annex VI in International Maritime Organization (IMO) Resolution [MEPC.361\(79\)](#) about the Mediterranean Sea becoming a sulphur oxide (SO_x) Emission Control Area (ECA) (SECA) with an effective date of 1 May 2025. See §3.3 below; and
- Amendments to MARPOL Annex VI (IMO Resolution [MEPC.362\(79\)](#)) concerning flashpoint information of fuel oil in Bunker Delivery Notes (BDN). See §3.6 and §3.7 below.

This MN also includes:

- a revised IMO Circular [MEPC.1/Circ.795/Rev.8](#) clarifying synthetic fuels as well as the use of the use of electronic BDN in §3.6 and §3.7 below; and

- guidance in IMO Resolution [MEPC.373\(80\)](#) on thermal waste treatment devices (TWTDS). See §1.2.3 and §3.5 below.

BACKGROUND

The RMI is signatory to MARPOL Annex VI, which entered into force 19 May 2005. This Annex sets limits on ship SO_x and nitrogen oxide (NO_x) emissions. It regulates the deliberate emissions of ozone-depleting substances (ODS), the emissions of volatile organic compounds (VOCs) from tankers, and the incineration of certain products on board ships. It also establishes fuel oil quality standards.

APPLICABILITY

The MARPOL Annex VI, Chapter 3 requirements apply to all RMI-flagged vessels, regardless of tonnage, except where expressly provided otherwise. This means it applies to vessels of any type whatsoever operating in the marine environment, including hydrofoil boats, air-cushion vehicles, submersibles, floating craft, yachts, and fixed or floating platforms.

All regulations in this MN refer to those in MARPOL Annex VI, unless otherwise specified.

REQUIREMENTS

1.0 Chapter 1 – General

1.1 Exceptions and Exemptions (Regulation 3)

- .1 MARPOL Annex VI Regulations do not apply to emissions necessary for securing the safety of the ship, saving life at sea, or those resulting from accidents and damage suffered to the ship or its equipment.
- .2 Under Regulation 3.2, the Administrator may temporarily exempt ships from specific provisions of MARPOL Annex VI to conduct trials for:
 - a. the development of emission reduction and control technologies; and
 - b. engine design programs.
- .3 Section 1.1.1.2 (above) does not release exempted ships from the requirement on fuel oil consumption data collection and reporting per Regulation 27.
- .4 In accordance with Regulation 3.3.2, express approval by the Administrator is required to exempt from Regulation 18 hydrocarbons that are produced and subsequently used on site as fuel. The exemption must be annotated on the International Air Pollution Prevention (IAPP) certificate¹.

1. This is an RMI national requirement.

- .5 Beginning 1 November 2022, unmanned non-self-propelled (UNSP) barges may be exempt from certain survey and certification requirements depending on their technical operation. The shipowner or operator must apply to the RO for the exemption.
 - a. The exemption certificate may be issued without Administrator approval, provided that the Recognized Organization (RO) has surveyed the barge to confirm:
 - (1) that it meets the definition of an UNSP barge according to MARPOL Annex VI, Regulation 2.1.32; and
 - (2) compliance with IMO Circular [MEPC.1/Circ.892](#).
 - b. The exemption certificate will cease to be valid if any of the approved exemption conditions are not met, or any conversion or alteration has occurred affecting the conditions under which the exemption certificate is issued.

1.2 Equivalents (Regulation 4)

- .1 Requests for equivalencies or alternative arrangements must be submitted to the Administrator for consideration and formal approval. They must include a recommendation from the RO confirming that the alternative arrangement is at least as effective in terms of emissions reductions as required by MARPOL Annex VI. Send requests to: technical@register-iri.com.
- .2 Exhaust Gas Cleaning Systems
 - a. Ships that intend to utilize an Exhaust Gas Cleaning Systems (EGCS) to comply with the SO_x emission requirements (Regulation 14) will be subject to the approval process for an equivalent arrangement.
 - b. An EGCS installed must be approved in accordance with the IMO *Guidelines for Exhaust Gas Cleaning Systems*. Changes affecting the performance of an EGCS must also be approved².
- .3 Thermal Waste Treatment Devices
 - a. Ships that intend to utilize a thermal waste treatment device (TWTD) (Regulation 16) will be subject to the approval process for an equivalent arrangement.
 - b. An installed TWTD must be approved in accordance with the IMO guidelines. Changes affecting the performance of a TWTD must also be approved³.

2. Refer to IMO Resolution [MEPC.340\(77\)](#).

3. Refer to IMO Resolution [MEPC.373\(80\)](#).

2.0 Chapter 2 – Survey, Certification, and Means of Control

2.1 Survey and Certification

- .1 Ships of 400 gross tons (GT) and above are subject to surveys as specified in Regulation 5.1. This includes every fixed and floating drilling rig and other platform.
- .2 As per Regulation 13.1.1, each marine diesel engine with a power output over 130 kilowatt (kW) that is installed (or undergoes major conversion) on a ship, irrespective of tonnage, must be surveyed and certified in accordance with the NO_x Technical Code 2008 (NTC 2008), as amended.
- .3 Ships fitted with selective catalytic reduction or exhaust gas recirculation (EGR) systems for compliance with the NO_x emission requirements (Regulation 13) are subject to the approval process in accordance with the NTC 2008, as amended. See IMO Circular [MEPC.1/Circ.895/Rev.1](#) for relevant unified interpretations.

2.2 Recognized Organizations

The Administrator has delegated, in accordance with IMO requirements, the survey and certification functions associated with MARPOL Annex VI Chapter 3 to its ROs who are specifically authorized to:

- .1 issue or endorse an IAPP certificate after completion of the relevant surveys referred to in §2.1.1 above.
- .2 issue an Engine International Air Pollution Prevention (EIAPP) certificate, reflecting that it has been issued on behalf of the RMI:
 - a. after completion of the relevant surveys referred to in §2.1.2 above; and
 - b. during change of flag to RMI.⁴
- .3 perform verification of VOC management plans (See §3.4.1b. below).
- .4 carry-out approval of shipboard incinerators and TWTDs (See §3.5 below).
- .5 review equivalents for compliance with the standards set forth in MARPOL Annex VI (See §1.2 above).
- .6 approve SO_x Emissions Compliance Plans and issue a SO_x Emission Compliance Certificate to ships which use an EGCS as an approved equivalent. IMO Resolution [MEPC.340\(77\)](#) requires the EGCS Technical Manual (ETM) and Onboard Monitoring Manual to be approved by the RO on behalf of the Administrator.

4. For yachts see [Yacht Technical Circular 9](#).

.7 issue Exemption Certificates for UNSP Barges.⁵ See §1.1.4 above.

2.3 Master or Shipowner Responsibilities

.1 Reporting

Whenever an accident occurs or a defect is discovered that affects the efficiency or completeness of EGCS equipment, the master or shipowner, must:

- a. report this information⁶ by completing the [TEC-02E](#) Form at the earliest opportunity to the Administrator at: technical@register-iri.com; and
- b. provide a corrective action plan on actions to be taken to address the defective equipment.

.2 Discharge and Record Keeping

Ship must follow any local regulations on discharges from open and closed loop EGCS, EGR systems, or TWTDs in their ports, harbors, estuaries, or coastal and other territorial waters. Relevant entries must be made in the EGCS, EGR or electronic record books as they are subject to inspection by port State control (PSC). Similarly, TWTD records must be retained on board in a tamper-proof manner. See further guidance in:

- a. IMO Circular [MEPC.1/Circ.900](#) for EGCS;
- b. IMO Resolution [MEPC.307\(73\)](#) for EGR; and
- c. IMO Resolution [MEPC.373\(80\)](#) for TWTD.

2.4 On-Board Recordkeeping

- .1 A MARPOL Annex VI Record Book must be established and maintained on-board, in the custody of the Chief Engineer, for filing:
 - a. the Engine Technical Files;
 - b. the Record Book of Engine Parameters, when the Engine Parametric Check Method is employed;
 - c. the Approved Method File, if applicable;
 - d. BDNs; and

5. See IMO Circular [FAL.2/Circ.133](#).

6. For notifications on EGCS malfunctions, see IMO Circular [MEPC.1/Circ.883/Rev.1](#) and IMO Resolution [A.1155\(32\)](#), Appendix 18.

- e. a tracking and control system for fuel oil samples.
- .2 The following may be incorporated into the MARPOL Annex VI Record Book, provided such entries are maintained separately within independent sections:
 - a. Ozone-Depleting Substances (ODS) record book (§3.1.2 below);
 - b. the record of NO_x Tier III engine operational status (§3.2.5 below); and
 - c. the fuel oil changeover record (§3.3.3 below).

3.0 Chapter 3 - Requirements for Control of Emissions from Ships

3.1 Ozone-Depleting Substances - ODS (Regulation 12)

Deliberate emissions of ozone-depleting substances are prohibited.

.1 Applicability

All ships with installations⁷ containing ODS must comply with Regulation 12, except for permanently sealed equipment where there are no refrigerant charging connections or potentially removable components that contain ODS.

.2 ODS Record Book

- a. The ODS Record Book is required for the following that have rechargeable systems containing ozone-depleting substances:
 - (1) ships of 400 GT and above; and
 - (2) drill rigs and platforms regardless of tonnage.
- b. The ODS Record Book may be incorporated into the MARPOL Annex VI Record Book. See §2.4.2 above.

7. As defined in Regulation 2.1.17.

3.2 Nitrogen Oxide Emissions - NO_x (Regulation 13)

It is prohibited to operate a marine diesel engine⁸ with a power output of more than 130 kW and which is installed or undergoes a major conversion on or after 1 January 2000, unless it complies with the applicable NO_x emission limits and requirements specified in Regulation 13.

.1 Applicability

Regulation 13 applies to any ship (including yachts and fishing vessels), irrespective of tonnage.

.2 NO_x Tier III Emission Control Areas (NECA)

Marine diesel engines installed on a ship must comply, based on the date of ship construction, with the NO_x Tier III emission standards when the ship is operating in an Emission Control Area (ECA)⁹.

NO_x Tier III ECA	Engine Compliance Required¹⁰ for Ships Constructed on or after
Baltic Sea Area	1 January 2021
North Sea Area	
North America	1 January 2016
United States Caribbean Sea	

.3 Application to Yachts

- a. Under MARPOL Annex VI Regulations 13.5.2.1 and 13.5.2.3, NO_x Tier III requirements do not apply to marine diesel engines installed on a ship specifically designed, and used solely, for recreational purposes when:
 - (1) it is less than 24 meters in length; or
 - (2) it is over 24 meters in length, less than 500 GT, and was constructed prior to 1 January 2021.
- b. For Regulations 13.5.2.1 and 13.5.2.3, the term “for recreational purposes” applies to private yachts (PYs), private yachts limited charter (PYLCs), commercial yachts (CYs), yachts engaged in trade (YETs), and passenger yachts (PAXYs).

8. As defined in Regulation 2.1.21.

9. Refer to Regulation 13.6. See also IMO Circular [MEPC.1/Circ.778/Rev.4](#) for a comprehensive list of ECAs.

10. Refer to Regulation 13.5.1.2.

.4 Exemptions

a. Emergency Equipment

Emergency diesel engines and engines installed in lifeboats, devices, or equipment intended to be used solely for emergencies are exempted from the Regulation 13 requirements.

b. Dual-Fuel and Tier II Marine Diesel Engines

As of 1 January 2019, ships subject to NO_x Tier III requirements that are fitted with dual-fuel or only Tier II marine diesel engines are temporarily exempted from complying with NO_x Tier III emission standards under specific operational circumstances. The exemption is to allow such ships to be built, converted, repaired, or maintained at shipyards or repair facilities located within NO_x Tier III ECAs.

c. Explicit authorization from the Administrator is not required, provided the following conditions are met:

- (1) the subject marine diesel engines meet the NO_x Tier II emission standards;
- (2) the ship is not permitted to load or unload cargo for the duration of the exemption;
- (3) the ship is only permitted to sail directly to or from the shipyard or other repair facility; and
- (4) the ship follows any additional specific routing requirements specified by the relevant port State(s).

d. For additional guidance, see Marine Guideline [2-13-6](#).

.5 Recordkeeping

a. Ships whose marine diesel engines are certified to both Tier II and Tier III or which are certified to Tier II only, must maintain a record of their marine diesel engine tier and operational (on/off) status upon entry into and exit from a NO_x Tier III ECA, or when their status changes within such an area, together with the date, time and position of the ship. See IMO Circular [MEPC.1/Circ.795/Rev.8](#).

b. The recording of the tier and on/off status of marine diesel engines (MARPOL Annex VI, Regulation 13.5.3) may be incorporated into the MARPOL Annex VI Record Book. See §2.4.2 above.

.6 Approved Method

Existing marine diesel engines with a power output greater than 5,000 kW and a per-cylinder displacement at or above 90 liters, installed on a ship constructed on or after 01 January 1990, but before 01 January 2000, may be subject to compliance with the NO_x emission limits (Tier I) if an approved method exists for that engine. For information on the availability of such approved methods refer to the MARPOL Annex VI module (Regulation 13.7.1) of the Global Integrated Shipping Information System (GISIS).¹¹

3.3 SO_x (Regulation 14)

.1 Sulphur Content of Fuel Oil

- a. Fuel oil used onboard any ship, irrespective of tonnage, must be compliant with the applicable sulphur content standards of Regulation 14. The fuel oil supplier is required to provide documentation as evidence the fuel complies with the required content levels (see §3.7 below).
- b. In addition to the current SO_x Emission Control Areas (SECAs) designated under Regulation 14.3, the Mediterranean Sea has been included as a new SECA with an effective date of 1 May 2025. See IMO Resolution [MEPC.361\(79\)](#).

.2 Non-Compliant Fuel Oil Carriage Prohibition

- a. The carriage of fuel oil for use on board the ship with a sulphur content exceeding 0.50% m/m is prohibited under Regulation 14.1. This prohibition does not apply to non-compliant fuel oil carried for use onboard a ship with an approved EGCS installed as an alternative means of compliance under Regulation 4.1 (see §1.2 above).
- b. Under exceptional circumstances, the Administrator may permit a ship to carry non-compliant fuel oil, with concurrent approval by the competent authorities for the port of destination and port of departure, as relevant. IMO Circular [MEPC.1/Circ.881](#) must be considered. See §3.8 below on reporting fuel oil non-availability.

.3 Fuel Oil Changeover Procedures and Recordkeeping

- a. Ships using separate fuel oils when operating within a SECA¹² must carry a written fuel oil changeover procedure,¹³ developed specifically for that ship.

11. Registration is free and required for new users.

12. Refer to Regulation 14.3.

13. Procedures for changing over from high to low sulphur fuel oil are provided in Appendix A.

- b. A record¹⁴ of the changeover operation must be maintained. It must include the date and time of the operation, position of the ship, and the low sulphur fuel oil volumes in each tank.
- c. The fuel changeover record may be incorporated into the MARPOL Annex VI Record Book. See §2.4.2 above.

.4 Fuel Oil Samples, Testing, and Verification

If a competent authority requires a sample to be analyzed, it must be done in accordance with Appendix VI of MARPOL Annex VI. The sample must be sealed by the representative of the competent authority in the presence of the ship's representative. The ship must retain a duplicate sample.

- a. **In-use fuel oil samples** must be obtained in accordance with IMO Circular [MEPC.1/Circ.864/Rev.1](#). The in-use fuel oil sampling point(s) must be fitted or designated for the purpose of taking these samples¹⁵ as follows:
 - (1) For existing ships constructed before 1 April 2022, no later than the first MARPOL Annex VI renewal survey on or after 1 April 2023;
 - (2) For new ships with the keel laid on or after 1 April 2022, on delivery.
- b. **Onboard samples** of fuel oil intended to be used or carried for use must be obtained in accordance with IMO Circular [MEPC.1/Circ.889](#). An onboard sample may be drawn directly from:
 - (1) the fuel oil tank; or
 - (2) the ship's transfer system.

An alternative sampling approach may be used provided it is representative of the fuel oil at the location from where it is drawn.

- c. **MARPOL delivered fuel oil samples** must be obtained and analyzed as provided in §3.7.3 below.

14. A sample record is provided in Appendix B.

15. Not applicable to low-flashpoint fuel used for combustion purposes for propulsion or onboard operation.

3.4 Volatile Organic Compounds - VOCs (Regulation 15)

.1 Tankers

- a. Tankers subject to vapor emissions control must be fitted with a vapor collection system, approved by an RO on behalf of the Administrator, within three years after a port/terminal has notified the IMO of its regulation of tanker VOC emissions. See [GISIS module](#) for ports or terminals where VOCs are controlled.
- b. The VOC management plan, required for all tankers carrying crude oil, must be approved by the Administrator, or an RO on behalf of the Administrator.

.2 Gas Carriers

Gas carriers must comply with the requirements of this section only if their loading and containment systems allow safe retention of non-methane VOCs on board, or their safe return ashore.

3.5 Shipboard Incineration (Regulation 16)

.1 Applicability

All ships, irrespective of tonnage, must comply with the regulations on shipboard incineration under Regulation 16. Special rules on incineration under domestic law may apply in some ports and may exist in some special areas. Operation of shipboard incinerators may require permission from individual coastal or port authorities concerned.

.2 Approvals

An incinerator on a ship constructed on or after 01 January 2000, or installed on or after 01 January 2000 must be approved by an RO on behalf of the Administrator, considering the standard specification for shipboard incinerators. For approval standards refer to Regulations 16.3 and 16.6.1.

.3 Alternative Waste Treatment Devices

The Administrator permits the development, installation, and operation of alternative TWTDs that meet or exceed the requirements of Regulation 16. Refer to §1.2 above.

3.6 Fuel Oil Quality (Regulation 18)

- .1 Fuel oil delivered to and used onboard any ship must meet the standards of Regulation 18.3.1 which addresses the composition of hydrocarbons to be

used for combustion purposes. This includes a fuel oil which is a blend of not more than 30% by volume of biofuel or synthetic fuel¹⁶.

- .2 Fuel oil for combustion purposes derived from methods other than petroleum refining must meet the composition standards of Regulation 18.3.2. This includes a fuel oil which is a blend of more than 30% by volume of biofuel or synthetic fuel¹⁷. Additionally, it must not exceed the sulphur content requirements (Regulation 14) or cause an engine to exceed the NO_x emission limits (Regulation 13).

- .3 Flashpoint

- a. The minimum flashpoint requirements for marine oil fuel are specified in the International Convention for the Safety of Life at Sea (SOLAS) II-2/4.2.1.
- b. On or after 1 May 2024 a BDN must contain either the flashpoint specified in accordance with ISO 2719:2016, or a statement that the flashpoint has been measured at or above 70°C (IMO Resolution [MEPC.362\(79\)](#)).

3.7 Bunker Delivery Notes and Delivered Fuel Oil Samples (Regulation 18)

- .1 Applicability

- a. For every ship of 400 GT and above, details of fuel delivered for combustion purposes must be documented by means of a BDN accompanied by a representative sample of the fuel oil, in accordance with the requirements as provided under Regulation 18.8.1.
- b. The requirements of this section do not apply to gas fuels such as liquefied natural gas, compressed natural gas, or liquefied petroleum gas. However, the sulphur content of gas fuels delivered to a ship specifically for combustion purposes on board that ship must be documented by the supplier. See MN [2-011-51](#).

- .2 BDN

The BDN, including electronic versions, must be provided in the format specified under MARPOL Annex VI, Appendix V. See also IMO Resolution MEPC.362(79).

16. Refer to IMO Circular [MEPC.1/Circ.795/Rev.8](#). For the purposes of this Regulation:

- i. a biofuel is a fuel oil which is derived from biomass and hence includes, but is not limited to, processed used cooking oils, fatty-acid-methyl-esters (FAME) or fatty-acid-ethyl-esters (FAEE), straight vegetable oils (SVO), hydrotreated vegetable oils (HVO), glycerol or other biomass to liquid (BTL) type products.
- ii. a synthetic fuel is a fuel oil from synthetic or renewable sources similar in composition to petroleum distillate fuels.

17. Refer to IMO Circular MEPC.1/Circ.795/Rev.8, including for acceptable routes to demonstrate NO_x emission compliance.

.3 MARPOL delivered sample

Representative samples of bunkered fuel oil must be obtained in accordance with IMO Resolution [MEPC.182\(59\)](#). If a competent authority requires this sample to be analyzed, then it must be verified in accordance with Part 1 of Appendix VI of MARPOL Annex VI. A written statement for the request should be provided to the ship¹⁸.

.4 Alternative Manner

For every ship of 400 GT and above, on scheduled services with frequent and regular port calls which would render compliance with the requirements of this section impracticable, an alternative documentation and sampling storage plan may be approved by the Administrator, after consideration of the circumstances involved and consultation with the affected States concerned.

.5 Non-Compliance

If a Bunker Delivery Note or representative sample is not provided by the bunker supplier or fuel oil is found not to be in compliance with that stated on the Bunker Delivery Note or the flashpoint requirement of SOLAS II-2/4.2.1, details must be recorded in the ship's log. The Administrator must be notified at: technical@register-iri.com.

3.8 Fuel Oil Availability (Regulation 18)

- .1 If a ship, despite all best efforts, is unable to obtain the required fuel oil to meet the applicable emission requirements, the Administrator must be promptly notified at: technical@register-iri.com. Notification must also be made to the competent authorities of the port of destination and port of departure, as relevant.
- .2 When a ship has presented evidence of the non-availability of compliant fuel oil, the Administrator will subsequently notify the IMO in accordance with Regulation 18.2.5. To do so, the following information must be provided to the Administrator:
 - a. a record of actions taken to attempt to achieve compliance;
 - b. copies of BDN(s);
 - c. post-bunkering laboratory analysis of drip samples taken to determine the percent concentration of sulphur found within the stemmed fuel oil; and

18. See IMO Circular [MEPC.1/Circ.884/Rev.1](#).

- d. evidence that the ship attempted to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase.
- .3 Ships unable to purchase compliant fuel oil must use the standard format for reporting fuel oil non-availability set out in Appendix C. This is referred to as Fuel Oil Non-Availability Reporting (FONAR) and is based on IMO Resolution [MEPC.320\(74\)](#). The Administrator must be notified at: technical@register-iri.com.
- .4 Providing the information above does not indemnify the ship from PSC action in the event compliant fuel oil could not be obtained. The relevant authorities for the port of destination, if Party to MARPOL Annex VI, are to consider all relevant circumstances in addition to the evidence provided when determining the appropriate action to take. Therefore, prompt notification is required when requesting any deviation from the standards in §3.3.

APPENDIX A – FUEL OIL CHANGEOVER PLAN

Written procedures must be developed for timely changing over between separate fuel oils. They should:

- Address safety issues, including whether it is appropriate to change to Low Sulphur Fuel Oil (LSFO) with the engine room unmanned (if applicable);
- Ensure that adequate quantities of ready-to-use fuel oil for engines and boilers used for propulsion and generating plant remain continuously available during any changeover procedures;
- Confirm with engine and equipment manufacturers that main and auxiliary engines, and associated fuel treatment equipment are suitable for use of the intended fuel oil;
- Implement a procedure on board the ship to check the compatibility of the different fuels to be used for the changeover dilution process. This may be by using a compatibility spot test kit onboard or, preferably, by sending samples of the two fuels to an independent testing service;
- Seek approval from the vessel's RO for any proposed changes to piping systems, drawings, or fuel storage arrangements that are planned to accommodate the use of LSFO onboard; or
- Information on coastal State emission requirements, including any regional or local mandates.

Several organizations and ROs have developed fuel oil changeover calculators, which provide an estimate of the time required to dilute or flush out the fuel oil service system to meet the applicable ECA limit. It should be noted that these calculations are an estimate for guidance purposes only and that spot samples to check actual sulphur content at various stages of the process are recommended to account for any operations not considered.

APPENDIX B – LOW SULPHUR FUEL OIL CHANGEOVER COMPLETION RECORD

[illegible]

APPENDIX C – COMPLIANT FUEL OIL NON-AVAILABILITY REPORT (FONAR)

Notes:

The [MI-112](#), *Compliant Fuel Oil Non-Availability Report*, must be sent to the Administrator and to the competent authorities in the relevant port(s) of destination in accordance with Regulation 18.2.4 of MARPOL Annex VI. As provided by IMO Resolution [MEPC.320\(74\)](#):

- C1.0 The report must be sent as soon as it is determined that the ship/operator will be unable to procure compliant fuel oil and preferably before the ship leaves the port/terminal where compliant fuel cannot be obtained. A copy of the FONAR should be kept on board for inspection for at least 36 months.
- C2.0 This report should be used to provide evidence if a ship is unable to obtain fuel oil compliant with the provisions stipulated in Regulations 14.1 or 14.4 of MARPOL Annex VI.
- C3.0 Before filing a FONAR, the following should be observed by the ship/operator:
 - 3.1 A fuel oil non-availability report is not an exemption. According to Regulation 18.2 of MARPOL Annex VI, it is the responsibility of the Party of the destination port, through its competent authority, to scrutinize the information provided and take action, as appropriate.
 - 3.2 In the case of insufficiently supported or repeated claims of non-availability, the Party may require additional documentation and substantiation of fuel oil non-availability claims. The ship/operator may also be subject to more extensive inspections or examinations while in port.
 - 3.3 Ships/operators are expected to take into account logistical conditions and terminal/port policies when planning bunkering, including but not limited to having to change berth or anchor within a port or terminal in order to obtain compliant fuel.
 - 3.4 Ships/operators are expected to prepare as far as reasonably practicable to be able to operate on compliant fuel oils. This could include, but is not limited to, fuel oils with different viscosity and different sulphur content not exceeding regulatory requirements (requiring different lube oils) as well as requiring heating and/or other treatment on board.