

REPUBLIC OF THE MARSHALL ISLANDS



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

MARITIME ADMINISTRATOR

TABLE OF CONTENTS

PURPOSE	2
BACKGROUND	3
APPLICABILITY	3
REQUIREMENTS	3
1.0 Chapter 1 – General	3
1.1 Exceptions and Exemptions (Regulation 3)	3
1.2 Equivalents (Regulation 4)	4
2.0 Chapter 2 – Survey, Certification, and Means of Control	5
2.1 Survey and Certification	5
2.2 ROs 5	
2.3 Master or Shipowner Responsibilities	6
3.0 Chapter 3 - Requirements for Control of Emissions from Ships	7
3.1 ODS Substances (Regulation 12)	7
3.2 NO _x Emissions (Regulation 13)	8
3.3 SO _x Emissions (Regulation 14)	11
3.4 VOCs (Regulation 15)	13
3.5 Shipboard Incineration (Regulation 16)	13
3.6 Fuel Oil Quality (Regulation 18)	14
3.7 BDNs and Delivered Fuel Oil Samples (Regulation 18)	14
3.8 Fuel Oil Availability (Regulation 18)	15
Appendix A – Fuel Oil Changeover Plan	17
Appendix B – Low Sulphur Fuel Oil Changeover Completion Record	18
Appendix C – FONAR	19



**REPUBLIC OF
THE MARSHALL ISLANDS**
MARITIME ADMINISTRATOR

Marine Notice

No. 2-013-8

Rev. Sep/2025

**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.373\(80\)](#)**, *2023 Guidelines for thermal waste treatment devices (TWTD)*, adopted 7 July 2023
 - (g) **IMO Resolution [MEPC.385\(81\)](#)**, *Amendments to MARPOL Annex VI on low-flashpoint fuels and other fuel oil related issues and replacement marine diesel engines*, adopted 22 March 2024
 - (h) **IMO Resolution [MEPC.386\(81\)](#)**, *2024 Guidelines as required by regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit*, adopted 22 March 2024
 - (i) **IMO Resolution [MEPC.392\(82\)](#)**, *Amendments to MARPOL Annex VI designating the Canadian Arctic and the Norwegian Sea as Emission Control Areas for Nitrogen Oxides, Sulphur Oxides and Particulate Matter, as appropriate*, adopted 4 October 2024
 - (j) **IMO Circular [MEPC.1/Circ.795/Rev.9](#)**, *Unified interpretation of MARPOL Annex VI*, issued 29 April 2024
 - (k) **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

- (l) **IMO Circular [MEPC.1/Circ.881](#)**, *Guidance for Port State Control on contingency measures for addressing non-compliant fuel oil*, issued 21 May 2019
- (m) **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
- (n) **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
- (o) **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
- (p) **IMO Circular [MEPC.1/Circ.895/Rev.1](#)**, *Unified interpretations to the NO_x Technical Code 2008, as amended*, issued 10 June 2022
- (q) **IMO Circular [MEPC.1/Circ.900](#)**, *2022 Guidance regarding the delivery of EGCS residues to port reception facilities*, issued 10 June 2022
- (r) **IMO Circular [MSC-MEPC.2/Circ.18](#)**, *Guidelines for the sampling of fuel oil for determination of compliance with MARPOL Annex VI and SOLAS chapter II-2*, issued 11 July 2024
- (s) **RMI Marine Guideline [2-11-15](#)**, *Organizations Acting on Behalf of the Republic of the Marshall Islands Maritime Administrator*
- (t) **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*
- (u) **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 vessels.

This MN supersedes Rev. May/2024. The following amendments have been made:

- Sections 3.2 and 3.3 have been updated to incorporate amendments to MARPOL Annex VI designating two new Emission Control Areas (ECAs) under Regulation 13 and 14, for the Canadian Arctic and Norwegian Sea (International Maritime Organization (IMO) Resolution [MEPC.392\(82\)](#));
- Section 3.2 incorporates MARPOL Annex VI amendments on a new reporting requirement for replacing marine diesel engines (IMO Resolution [MEPC.386\(81\)](#)); and

- Section 3.7 has been amended to address revisions related to demonstrating compliance with Regulation 18 requirements on fuel oil quality for low-flashpoint fuels and gas fuels (IMO Resolution [MEPC.385\(81\)](#)).

BACKGROUND

The RMI is signatory to MARPOL Annex VI. MARPOL Annex VI, Chapter 3 sets limits on ship sulphur oxide (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 noted 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)

- 1.1.1 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.
- 1.1.2 Under Regulation 3.2, the RMI Maritime Administrator (the “Administrator”) may temporarily exempt ships from specific provisions to conduct trials for:
 - .1 the development of emission reduction and control technologies; and
 - .2 engine design programs.
- 1.1.3 Section 1.1.2 above does not release exempted ships from the requirement on fuel oil consumption data collection and reporting per Regulation 27.
- 1.1.4 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) certificate.¹

1.1.5 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 Recognized Organization (RO) for the exemption.

.1 The exemption certificate may be issued without Administrator approval, provided that the RO has surveyed the barge to confirm:

a. that it meets the definition of a UNSP barge according to Regulation 2.1.32; and

b. compliance with IMO Circular [MEPC.1/Circ.892](#).

.2 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)

1.2.1 Requests for equivalencies or alternative arrangements must be submitted to the Administrator at technical@register-iri.com 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.

1.2.2 Exhaust Gas Cleaning Systems (EGCS)

.1 Ships that intend to utilize an EGCS to comply with the SO_x emission requirements (Regulation 14) will be subject to the approval process for an equivalent arrangement.

.2 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 approved.²

1.2.3 Thermal Waste Treatment Devices (TWTD)

.1 Ships that intend to utilize a TWTD (Regulation 16) will be subject to the approval process for an equivalent arrangement.

¹ This is an RMI national requirement.

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

- .2 An installed TWTD must be approved in accordance with the IMO *Guidelines for Thermal Waste Treatment Devices*. Changes affecting the performance of a TWTD must also be approved.³

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 kilowatts (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, and related guidelines as relevant. See IMO Circular [MEPC.1/Circ.895/Rev.1](#) for relevant unified interpretations.

2.2 ROs

- 2.2.1 The Administrator has delegated the survey and certification functions associated with Chapter 3 to its ROs.⁴ They 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 perform verification of VOC management plans (see §3.4.1.2 below).
 - .3 carry-out approval of shipboard incinerators and TWTDs (see §3.5 below).
 - .4 review equivalents for compliance with the standards set forth in MARPOL Annex VI (see §1.2 above).
 - .5 approve SO_x Emissions Compliance Plans and issue a SO_x Emission Compliance Certificate to ships which use an EGCS as an approved equivalent;⁵ and

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

⁴ See RMI Marine Guideline [2-11-15](#).

⁵ IMO Resolution [MEPC.340\(77\)](#) requires the EGCS Technical Manual and Onboard Monitoring Manual to be approved by the RO on behalf of the Administrator.

- .6 issue Exemption Certificates for UNSP Barges⁶ (see §1.1.4 above).
- .7 issue an Engine IAPP certificate, reflecting that it has been issued on behalf of the Administrator:
 - a. after completing the relevant surveys referred to in §2.1.2 above; and
 - b. during a change of flag to the RMI.⁷

2.3 Master or Shipowner Responsibilities

2.3.1 Reporting

- .1 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 information⁸ by completing and submitting, at the earliest opportunity, the *Interim Indication of Ongoing Compliance in the Case of EGCS Sensor Failure Described in IMO Circular [MEPC.1/Circ.883/Rev.1](#) (TEC-02E)* to the Administrator at: technical@register-iri.com; and
 - b. provide a corrective action plan to address the defective equipment.

2.3.2 Discharge and Record Keeping

- .1 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.
- 2. 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.

⁶ See IMO Circular [FAL.2/Circ.133](#).

⁷ For yachts, see [Yacht Technical Circular 9](#).

⁸ For notifications on EGCS malfunctions, see IMO Circular [MEPC.1/Circ.883/Rev.1](#) and IMO Resolution [A.1185\(33\)](#), Appendix 18.

2.4 Onboard Recordkeeping

2.4.1 A MARPOL Annex VI Record Book must be established and maintained onboard, in the custody of the Chief Engineer, for filing:

- .1 the Engine Technical Files;
- .2 the Record Book of Engine Parameters, when the Engine Parametric Check Method is employed;
- .3 the Approved Method File, if applicable;
- .4 Bunker Delivery Notes (BDN); and
- .5 a tracking and control system for fuel oil samples.

2.4.2 The following may be incorporated into the MARPOL Annex VI Record Book, provided such entries are maintained separately within independent sections:

- .1 ODS record book (see §3.1.2 below);
- .2 the record of NO_x Tier III engine operational status (see §3.2.5 below); and
- .3 the fuel oil changeover record (see §3.3.3 below).

3.0 Chapter 3 - Requirements for Control of Emissions from Ships

3.1 ODS Substances (Regulation 12)

3.1.1 Deliberate emissions of ODS are prohibited.

3.1.2 Applicability

All ships with installations⁹ 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.

⁹ As defined in Regulation 2.1.17.

3.1.3 ODS Record Book

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

3.2 NO_x Emissions (Regulation 13)

- 3.2.1 It is prohibited to operate a marine diesel engine¹⁰ 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.

3.2.2 Applicability

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

3.2.3 NO_x Tier III ECAs (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 a designated NECA.¹¹

NECA	Engine Compliance Required ¹² for Ships Constructed on or after
North American	1 January 2016
United States Caribbean Sea	
Baltic Sea	1 January 2021
North Sea	
Canadian Arctic	1 January 2025
Norwegian Sea	1 March 2026 ¹³

¹⁰ As defined in Regulation 2.1.21.

¹¹ Refer to Regulation 13.6. See also IMO Circular [MEPC.1/Circ.778/Rev.4](#) for a comprehensive list of ECAs.

¹² Refer to Regulation 13.5.1.2.

¹³ In accordance with Regulation 13.5.1.2.3 (see IMO Resolution [MEPC.392\(82\)](#)), specifically for the Norwegian Sea ECA, the term “ship constructed on or after 1 March 2026” means a ship: 1) for which the building contract is placed on or after 1 March 2026; or 2) in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction on or after 1 September 2026; or 3) the delivery of which is on or after 1 March 2030.

3.2.4 Application to Yachts

- .1 Under 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:
 - a. it is less than 24 meters (m) in length; or
 - b. it is over 24 m in length, less than 500 GT, and was constructed before 1 January 2021.
- .2 For Regulations 13.5.2.1 and 13.5.2.3, the term **for recreational purposes** applies to private yachts, private yachts limited charter, commercial yachts, yachts engaged in trade, and passenger yachts.

3.2.5 Exemptions

- .1 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.
- .2 Dual-Fuel and NO_x 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 NO_x 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 NECAs.
- .3 Explicit authorization from the Administrator is not required, provided the following conditions are met:
 - a. the subject marine diesel engines meet the NO_x Tier II emission standards;
 - b. the ship is not permitted to load or unload cargo for the duration of the exemption;
 - c. the ship is only permitted to sail directly to or from the shipyard or other repair facility; and
 - d. the ship follows any additional specific routing requirements specified by the relevant port State(s).
- .4 See Marine Guideline [2-13-6](#) for additional guidance.

3.2.6 Recordkeeping

- .1 Ships whose marine diesel engines are certified to both NO_x Tier II and NO_x Tier III or which are certified to NO_x 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 NECA, 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.9](#).
- .2 The recording of the tier and on or off status of marine diesel engines (Regulation 13.5.3) may be incorporated into the MARPOL Annex VI Record Book (see §2.4.2 above).

3.2.7 Major Conversion¹⁴

- .1 The NO_x emission limits applicable at the time when a non-identical marine diesel engine is replaced, or when an additional marine diesel engine is installed, must be complied with accordingly. For the purposes of this requirement, the installation of a marine diesel engine as a replacement to a steam system is considered a replacement engine.
- .2 Where it is determined that a non-identical replacement marine diesel engine cannot meet NO_x Tier III emission requirements in accordance with IMO Resolution [MEPC.386\(81\)](#), the replacement engine must meet NO_x Tier II emission requirements.
- .3 As of 1 August 2025, the Administrator must be notified by the shipowner or RO of all instances where a NO_x Tier II rather than a NO_x Tier III replacement engine has been installed in accordance with Regulation 13.2.2. The notification and supporting documentation must be sent to: technical@register-iri.com.

3.2.8 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 1 January 1990, but before 1 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) in IMO's Global Integrated Shipping Information System (GISIS).¹⁵

¹⁴ For the purpose of Regulation 13, **major conversion** means a modification on or after 1 January 2000 of a marine diesel engine where: 1) the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed, or 2) any substantial modification, as defined in the 2008 NTC, is made to the engine, or 3) the maximum continuous rating of the engine is increased by more than 10%.

¹⁵ Registration is free and required for new users.

3.3 SO_x Emissions (Regulation 14)

3.3.1 Sulphur Content of Fuel Oil

- .1 The sulphur content of fuel oil used or carried for use on board any ship, irrespective of tonnage, must not exceed 0.50% mass by mass (m/m).
- .2 While a ship is operating within a SO_x ECA (SECA)¹⁶ designated under Regulation 14.3, the sulphur content of fuel oil used on board must not exceed 0.10% m/m.

SECA	Effective date
Baltic Sea	in force
North Sea	in force
North American	in force
United States Caribbean Sea	in force
Mediterranean Sea	in force
Canadian Arctic	1 March 2027 ¹⁷
Norwegian Sea	

- .3 The fuel oil supplier must provide documentation as evidence that the fuel complies with the required content levels (see §3.7 below).

3.3.2 Non-Compliant Fuel Oil Carriage Prohibition

- .1 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).
- .2 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.

3.3.3 Fuel Oil Changeover Procedures and Recordkeeping

- .1 Ships using separate fuel oils when operating within a SECA must carry a written fuel oil changeover procedure,¹⁸ developed specifically for that ship.

¹⁶ Refer to Regulation 14.3. See also IMO Circular [MEPC.1/Circ.778/Rev.4](#) for a comprehensive list of ECAs.

¹⁷ See IMO Resolution [MEPC.392\(82\)](#) and Regulation 14.7.

¹⁸ Procedures for changing over from high to low sulphur fuel oil are provided in Appendix A.

- .2 A record¹⁹ 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.
- .3 The fuel changeover record may be incorporated into the MARPOL Annex VI Record Book (see §2.4.2 above).

3.3.4 Fuel Oil Samples, Testing, and Verification

- .1 If a competent authority requires a sample to be analyzed, it must be done in accordance with MARPOL Annex VI, Appendix 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 samples²⁰ as follows:
 - (i) For existing ships constructed before 1 April 2022, no later than the first MARPOL Annex VI renewal survey on or after 1 April 2023;
 - (ii) 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:
 - (i) the fuel oil tank; or
 - (ii) the ship's transfer system.
 - (iii) 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 §3.7.2 below.

¹⁹ A sample record is provided in Appendix B.

²⁰ Not applicable to low-flashpoint fuel used for combustion purposes for propulsion or onboard operation.

3.4 VOCs (Regulation 15)

3.4.1 Tankers

- .1 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 the [GISIS module](#) for ports or terminals where VOCs are controlled.
- .2 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.

3.4.2 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 1 January 2000 or installed on or after 1 January 2000 must be approved by an RO on behalf of the Administrator, considering the standard specification for shipboard incinerators. Refer to Regulations 16.3 and 16.6.1 for approval standards.

.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 (see §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 fuel.²¹
- .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 fuel.²² Additionally, it must not exceed the sulphur content requirements (Regulation 14) or cause an engine to exceed the NO_x emission limits (Regulation 13).

3.7 BDNs and Delivered Fuel Oil Samples (Regulation 18)

3.7.1 BDN

- .1 For every ship of 400 GT and above, details of fuel oil delivered to and used on board that ship must be documented by means of a BDN. The format of the BDN, including electronic versions, must include at least the information specified under MARPOL Annex VI, Appendix V.
- .2 Details of low-flashpoint fuel²³ or gas fuel²⁴ delivered to and used on board must also be documented by a BDN including at least the following information:
 - a. name and IMO number of the receiving ship;
 - b. port;
 - c. date of commencement of delivery;
 - d. name, address, and telephone number of supplier;
 - e. product name(s);

²¹ Refer to IMO Circular [MEPC.1/Circ.795/Rev.9](#). 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.

²² Refer to IMO Circular [MEPC.1/Circ.795/Rev.9](#) for acceptable routes to demonstrate NO_x emission compliance.

²³ As defined by Regulation 2.1.20

²⁴ As defined by Regulation 2.1.33

- f. quantity in metric tonnes;
- g. density as determined by a test method appropriate to the fuel type and associated temperature;
- h. supplier's signed and certified declaration of conformity to the relevant requirements of Regulation 18.3; and
- i. actual sulphur content as determined by a test method appropriate to the fuel type, or statement confirming the sulphur content is less than 0.001% m/m.

3.7.2 MARPOL delivered sample

- .1 Representative samples of bunkered fuel oil must be obtained in accordance with IMO Circular [MSC-MEPC.2/Circ.18](#). If a competent authority requires this sample to be analyzed, then it must be verified in accordance with MARPOL Annex VI, Appendix VI, Part I. A written statement for the request should be provided to the ship.²⁵
- .2 This requirement does not apply to low-flashpoint fuel or gas fuel.

3.7.3 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.

3.7.4 Non-Compliance

If a BDN 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 BDN, 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)

- 3.8.1 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 by sending a *Compliant Fuel Oil Non-Availability Report*

²⁵ See IMO Circular [MEPC.1/Circ.884/Rev.1](#).

(FONAR) (MI-112) to technical@register-iri.com using the format in Appendix C of this MN. Notification must also be made to the competent authorities of the port of destination and port of departure, as relevant.

- 3.8.2 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:
- .1 a record of actions taken to attempt to achieve compliance;
 - .2 copies of BDNs; and
 - .3 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.
- 3.8.3 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

1.0 Written Procedures

- 1.1 Written procedures must be developed for timely changing over between separate fuel oils. They should:
 - .1 address safety issues, including whether it is appropriate to change to Low Sulphur Fuel Oil (LSFO) with the engine room unmanned (if applicable);
 - .2 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;
 - .3 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;
 - .4 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;
 - .5 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
 - .6 include information on coastal State emission requirements, including any regional or local mandates.
- 1.2 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 – FONAR

1.0 Instructions

- 1.1 The [MI-112](#) must be sent to the Administrator and to the competent authorities in the relevant port(s) of destination in accordance with MARPOL Annex VI, Regulation 18.2.4 (see IMO Resolution [MEPC.320\(74\)](#)).
 - 1.1.1 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.
 - 1.1.2 This report should be used to provide evidence if a ship is unable to obtain fuel oil compliant with the provisions stipulated in MARPOL Annex VI, Regulations 14.1 or 14.4.
 - 1.1.3 Before filing a FONAR, the following should be observed by the ship/operator:
 - .1 A fuel oil non-availability report is not an exemption. According to MARPOL Annex VI, Regulation 18.2, 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.
 - .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 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.
 - .4 Ships and 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.