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Merchant Shipping (Prevention of Air Pollution from Ships) Regulations, 2009.

**A Legislation Drafting Project submitted in partial fulfillment of the
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EXPLANATORY NOTE

1. Introduction

Although ships are the most effective means of transport, the political debate arising in respect of emissions from ships is very intensive. According to various statistics, ships are responsible for 2% of carbon dioxide emissions while carrying 90% of international goods¹. Sulphur Oxide (“SO”) emissions account to around 4% world wide. Nitrogen Oxide (“NO”) emissions from ships are responsible for 7% of world wide emissions. Heavy Fuel Oil² is often used on board ships as fuel, which makes bunker quality also an issue of great concern.³

With this in mind, during its 70th session in 1992, the Assembly of the International Maritime Organization (“IMO”) recognised the urgent necessity of establishing a policy on prevention of air pollution from ships. In order for this objective to be achieved it proposed that the Marine Environment Protection Committee (“MEPC”) created an annex to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (“MARPOL 73/78”).⁴

Pursuant to this proposal and following extensive discussion at the Sub-Committee on Bulk Chemicals and its Working Group on Air Pollution, the MEPC prepared a draft Protocol and Annex VI to MARPOL 73/78. An International Conference of Parties to

¹ IMO handbook: *Annex VI of MARPOL 73/78 – Regulations for the Prevention of Air Pollution from Ships & NOx Technical Code*, 1998.

² Heavy fuel oils are blended products based on the residues from various refinery distillation and cracking processes. They are viscous liquids with a characteristic odour and require heating for storage and combustion. Heavy fuel oils are used in medium to large industrial plants, marine applications and power stations in combustion equipment such as boilers, furnaces and diesel engines. “Heavy fuel oil” is a general term - other names commonly used to describe this range of products include: residual fuel oil, bunker fuel, bunker C, fuel oil No 6, industrial fuel oil, marine fuel oil and black oil. In addition, terms such as heavy fuel oil, medium fuel oil and light fuel oil are used to describe products for industrial applications to give a general indication of the viscosity and density of the product. Definition obtained from CONCAWE Dossier, prepared in Brussels, May 1998, <http://www.fecyt.es/especiales/vertidos/pdf/Rpt_98-109.pdf>.

³Information in this paragraph was obtained from a brochure prepared by Verband Deutscher Reeder, p.3, <http://www.bsh.de/de/Meeresdaten/Umweltschutz/MARPOL_Umweltuebereinkommen/MARPOL-L-Broschuere.pdf>.

⁴ Ibid. (IMO handbook).

MARPOL 73/78 was convened by IMO in September 1997 where the Protocol of 1997 to amend MARPOL 73/78 was adopted. The said Protocol set out in its annex the new Annex VI, Regulations for the Prevention of Air Pollution from Ships, and eight Conference Resolutions, including Resolution 2, which contains the Technical Code on Control of Emission and Nitrogen Oxides from Marine Diesel Engines (“NOx Technical Code”).

MARPOL Annex VI entered into force in May 2005 and has, so far been ratified by 53 countries, representing approximately 81.88 % of the gross tonnage of the world's merchant shipping fleet.

2. MARPOL Annex VI

MARPOL Annex VI sets limits on sulphur oxide (“SOx”) and nitrogen oxide (“NOx”) emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances. The Annex includes a global cap of 4.5% m/m on the sulphur content of fuel oil and calls on the IMO to monitor the worldwide average sulphur content of fuel. Annex VI also contains provisions allowing for special SOx Emission Control Areas (“SECAs”)⁵ which areas have more stringent controls on sulphur emissions, where the sulphur content of fuel oil used on board ships must not exceed 1.5% m/m. Alternatively, ships must fit an exhaust gas cleaning system or use any other technological method to limit SOx emissions.⁶

In July 2005, at its 53rd session, the MEPC reviewed Annex VI and the NOx Technical Code to take into account improved technology and the need to further reduce emissions from ships. In April 2008 the MEPC approved proposed amendments to MARPOL Annex VI which would see a progressive reduction in SOx emissions from ships with the global sulphur cap reduced initially to 3.5% (from the

⁵ The North Sea was designated as a SECA in July 2005 and the Baltic Sea in May 2006. Ships failing to comply with Regulation 14 of MARPOL Annex VI while operating inside the SECA will be detained. The ship must ensure that proper fuel documentation is used as required under Regulation 14(6), including but not limited to documentation of fuel change-over procedures and execution, as well as documentation of the fuel quality.

⁶ IMO's official website: <http://www.imo.org/Environment/mainframe.asp?topic_id=233>.

current 4.5%, to be effective as of 1st January 2012, and progressively to 0.5%, from 1st January 2020, subject to a feasibility review to be completed no later than 2018).⁷

In October 2008, during its 58th session, the MEPC reviewed and finalised the text of MARPOL Annex VI and the revised NOx Code, as well as the draft guidelines for the development of a Volatile Organic Compound (“VOC”) Management Plan, which intends to reduce VOC emissions during ship operations.

The said amendments will be deemed to have been accepted on 1st January 2010 unless prior to that date, not less than one-third of the parties or parties representing 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 IMO, their objection to the amendments.

With regard to enforcement measures taken under MARPOL Annex VI, Regulation 10 provides:

1. A ship, when in a port or an offshore terminal under jurisdiction of another Party, is subject to inspection by officers duly authorised by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from ships.
2. In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as to ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.
3. Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

To summarize, MARPOL Annex VI regulates the emission into the atmosphere of specified pollutants from ships by:-

⁷ IMO’s official website: <http://www.imo.org/Environment/mainframe.asp?topic_id=233>.

- limiting the discharge of nitrogen oxides from large marine diesel engines;
- governing the sulphur content of marine diesel fuel;
- prohibiting the emission of ozone-depleting compounds during the transfer of cargoes between tankers and terminals;
- setting standards for shipboard incinerators and fuel oil quality; and
- establishing requirements for platforms and drilling rigs at sea.

IMO has also recognised the need to regulate the quality of bunkers delivered to ships not only as sulphur content but in accordance with the international standards for quality.⁸

3. European Legislation on Air Pollution from Ships

3.1 The European Union

The European Union has set legislation in place with Directive 2005/33/EC⁹ of the European Parliament and Council of 6th July 2005 amending Directive 1999/32/EC¹⁰ on the reduction in the sulphur content of certain liquid fuels including marine fuels. This legislation applies to ships calling at European ports irrespective of their flag. Paragraph (12) of Directive 2005/33/EC states:

"Enforcement of the obligations with regard to the sulphur content of marine fuels is necessary to achieve the aims of this Directive. Effective sampling and dissuasive penalties throughout the Community are necessary to ensure credible implementation of this Directive. Member States should take enforcement action with respect to vessels flying their flag and to vessels of all flags while in their ports. It is also appropriate for Member States to cooperate closely to take additional enforcement action with respect to other vessels in accordance with international maritime law."¹¹

⁸ The ISO 8217-2005 standard sets minimum requirements for contents and compositions in marine fuels.

⁹ Official Journal (EC) L 191, 22.7.2005, p. 59.

¹⁰ Official Journal (EC) L 121, 11.5.1999, p. 13.

¹¹ Directive 2005/33/EC of the European Parliament and of the Council of 6 July 2005 amending Directive 1999/32/EC, Official Journal of the European Union, 22.7.2005, L 191, p. 59.

Therefore, Similar to MARPOL Annex VI, Directive 2005/33/EC has established new requirements for the quality of fuel oils used onboard ships. Besides setting limitations on the fuel's sulphur contents, the said Directive defines identical SECAs as already found in MARPOL Annex VI but with different application dates. Furthermore the Directive defines new limits for the fuel's sulphur content whereby all marine fuels used within both SECAs (North Sea and Baltic Sea) are to have a maximum sulphur content of 1.5% which limit is similar to that set in MARPOL Annex VI. Additionally the Directive sets new limitations to marine distillate fuels. The Directive also lays down special requirements for passenger ships and ferries following a regular schedule between EU ports.

The EU stressed the need for this Directive since MARPOL Annex VI has not yet been ratified by seven of its Member States: Austria, Czech Republic, Hungary, Ireland, Malta, Portugal and Slovakia – although it was adopted in 1997 and entered into force in May 2005. Hence the fact that these Member States still have to ratify Annex VI continues to undermine the commitment of the EU to low-emission shipping, and now also weakens the European Union's hand in negotiating amendments through its observer status in the IMO to tighten the provisions of the Annex. The EU's current thematic strategy on air pollution is to establish NOx emission standards for ships using EU ports, to designate the Mediterranean Sea and North East Atlantic as SECAs, and to lower the maximum sulphur content in marine fuels used in SECA and by passenger vessels from 1.5% to 0.5%, and to establish a Marine Fuel Quality specification directive.¹² Such requirements go beyond the ambit of MARPOL Annex VI, and the Directive may therefore be seen to be an 'overregulation' in some areas for European Member States parties to MARPOL Annex VI.

Article 11 of the Directive states that Member States must determine effective, proportionate and dissuasive penalties for non-conformity with the national provisions adopted pursuant to the Directive.

¹² Information obtained from Power Point presentation delivered by Mr. Hans Meijer DG ENV Clean Air and Transport, European Commission, May 2007, <<http://www.ebcd.org/EPISD/2007/23May2007/Meijer.pdf>>.

3.2 Malta

The Maltese Government incorporated MARPOL's Annex I, II and III into one set¹³ of regulations under the Merchant Shipping Act¹⁴. MARPOL's Annex V has also been incorporated into Maltese law through a separate set¹⁵ of regulations falling under the same Act. Regrettably however, MARPOL Annex VI has not been ratified by the Maltese Government. Malta, being a flag state, has a moral duty towards shipowners to implement MARPOL Annex VI. Thus it is of utmost importance that Annex VI is ratified by Malta in order to avoid fragmented legislations that would create many difficulties for commercial shipping.

In February 2008, Malta transposed Council Directive 1999/32/EC of 26th April 1999 relating to a reduction in the sulphur content of certain liquid fuels as amended by Regulation (EC) No 1882/2003¹⁶ of the European Parliament and of the Council of 29th September 2003 and Directive 2005/33/EC of the European Parliament and Council of 6th July 2005, through the Quality Fuels Regulations, Subsidiary Legislation 423.29, 1st February 2008 (Legal notice 44 of 2008).

The above-mentioned subsidiary legislation covers the Directive which, although sets similar laws to those found under MARPOL Annex VI, is restricted to the regulation of "*the quality of fuels available in Malta*"¹⁷. Since the subsidiary legislation does not define "Malta", nor does the Malta Resources Authority Act¹⁸ under which it is issued, the definition to be referred to is that found in the Constitution of Malta, which under Article 1 defines "the territories of Malta" as consisting of "*those territories comprised in Malta...including the territorial waters thereof, or of such territories*

¹³ MARPOL Annexes I and II were originally incorporated into Regulations under the Merchant Shipping Act entitled "Merchant Shipping (Prevention of Pollution from Ships) Regulations, 2003 via Legal Notice 58 of 2003, which were then revoked by the subsequent Legal Notice 332 of 2003 which brought into force Regulations by the same name, in order to comprise MARPOL Annexes I, II and III.

¹⁴ Chapter 234 of the Laws of Malta.

¹⁵ Merchant Shipping (Prevention of Pollution by Garbage) Regulations, via Legal Notice 304 of 2003.

¹⁶ Official Journal (EC) L 284, 31.10.2003, p. 1.

¹⁷ Article 1(2), Subsidiary Legislation 423.29, Quality of Fuels Regulations, 1st February 2008.

¹⁸ Chapter 423 of the Laws of Malta.

and waters as Parliament may from time to time by law determine". Furthermore, Regulation 9(1) of Subsidiary Legislation 423.29 provides that the prohibition of use of marine fuels with a sulphur content exceeding 1.5% by mass within Malta's territorial waters, internal waters and pollution control zones falling within SOx Emission Control Areas *"shall apply to all vessels of all flags, including vessels whose journey began outside the Community."* Regulation 9(3) goes on to state that subregulation (1) is applicable to vessels flying the Maltese flag and vessels of all flags while in Maltese ports, if such ports border SOx Emission Control Areas. Hence it is clear that this subsidiary legislation covers vessels within Malta's territorial waters, and would not cover Maltese flagged ships outside these waters.

There are also certain areas which are covered by MARPOL Annex VI which are not regulated by the EU Directive thereby not reflected in the subsidiary legislation. These include in particular NOx ozone depleting substances, VOCs, the quality of bunkers delivered to ships not only as sulphur content but in accordance with the international standards for quality¹⁹, which are all highly important rules, and must definitely be incorporated into Maltese law.

Subsidiary Legislation 423.29 establishes the Malta Resources Authority ("MRA") as the competent authority responsible for the supply of fuels in Malta, and the Regulations indicate that the MRA will be delegating certain tasks such as onboard inspections and the collection of fuel samples to Port State Control Officers who fall under the control of the Malta Maritime Authority (Ports Directorate). Regulation 13 of the Subsidiary Legislation provides a punishment of a fine (multa) of not less than €10,000 but not exceeding €69,800 or to imprisonment for a term not exceeding eighteen months, or to both such fine and imprisonment for persons committing an offence against the regulations.

4. The proposed legislation

Through this draft legislation project it is proposed that MARPOL Annex VI is incorporated into Maltese law through Regulations falling under the Merchant

¹⁹ Information obtained from article published by Intertanko: <<https://www.intertanko.com/templates/intertanko/issue.aspx?id=18929>>.

Shipping Act, so as to follow the same pattern taken for the implementation of Annexes I, II, III and V. Since MARPOL Annex VI deals with international maritime obligations, these fall within the ambit of the Malta Maritime Authority (Merchant Shipping Directorate). The said authority is also responsible for Port State Control, the main enforcement mechanism under MARPOL Convention.

These Regulations, besides taking into account all amendments to MARPOL Annex VI as at today, together with any further future amendments, will also make cross-references to Subsidiary Legislation 423.29, particularly where there may be possible overlapping in respect of the authorities concerned and certain requirements to be followed. The penalties to be proposed under the draft legislation will follow closely those provided in the regulations incorporating MARPOL Annexes I, II, III and V, as well as those set in the Quality of Fuels Regulations, due to the similarity of some of the issues being dealt with in the proposed Regulations.

In this way, it is hoped that Maltese legislation on air pollution from ships would be streamlined, and all requirements – both those falling under MARPOL Annex VI and EU Directive 2005/33/EC - are properly addressed, since although possible overlaps may occur, it is hoped that any potential conflicts and/or misunderstandings do not.

It must be pointed out that the proposed Regulations maintain the language of Annex VI. However there are some instances where this has been modified to “domesticate” the Regulations into national law. Furthermore, certain provisions have been omitted intentionally because they directly refer to the obligations of the ratifying State Party at an international level, whereas the Regulations are intended to regulate the relations between Malta and its citizens, rather than the duties owed by Malta to the international community.

On another note, although the proposed Regulations make reference to the NOx Code, the Code itself has not been given force of law by the proposed Regulations. However it is submitted that such Code would have to be considered by the Maltese Government for possible incorporation into Maltese law which too would enhance Malta’s contribution to safeguarding of the environment.

Conclusion

MARPOL Annex VI is expected to have a significant beneficial impact on the atmospheric environment and human health, particularly of the people living in port cities and coastal communities. Malta being an island of its size will definitely benefit from the proposed Regulations.

MERCHANT SHIPPING ACT 1973
(Chapter 234)

Merchant Shipping (Prevention of Air Pollution from Ships) Regulations, 2009

1. (1) The title of these regulations is the Merchant Shipping (Prevention of Air Pollution from Ships) Regulations, 2009. **Citation and scope**

(2) These regulations shall apply to all ships, except where expressly provided otherwise.

2. (1) In these regulations, unless the context otherwise requires:- **Definitions**

“Act” means the Merchant Shipping Act;

“a similar stage of construction” means the stage at which:

(a) construction identifiable with a specific ship begins;
and

(b) assembly of that ship has commenced comprising at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less;

“anniversary date” means the day and the month of each year which will correspond to the date of expiry of the International Air Pollution Prevention Certificate;

“auxiliary control device” means a system, function, or control strategy installed on a marine diesel engine that is used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure, or that is used to facilitate the starting of the engine. An auxiliary control device may also be a strategy or measure that has been satisfactorily demonstrated not to be a defeat device;

“competent authority” means the Malta Maritime Authority;

“continuous feeding” is defined as the process whereby waste is fed into a combustion chamber without human assistance while the incinerator is in normal operating conditions with the combustion chamber operative temperature between 850°C and 1,200°C;

“Convention” means the MARPOL Convention;

“defeat” device means a device which measures, senses, or responds to operating variables (e.g., engine speed, temperature,

intake pressure or any other parameter) for the purpose of activating, modulating, delaying or deactivating the operation of any component or the function of the emission control system such that the effectiveness of the emission control system is reduced under conditions encountered during normal operation, unless the use of such a device is substantially included in the applied emission certification test procedures;

“emission” means any release of substances, subject to control by these regulations, from ships into the atmosphere or sea;

“Emission Control Area” means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO_x or SO_x and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas shall include those listed in, or designated under, regulations 13 and 14 of these regulations;

“fuel oil” means any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including distillate and residual fuels;

“gross tonnage” means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurements of Ships, 1969 or any successor Convention;

“installations” in relation to regulation 12 hereof means the installation of systems, equipment including portable fire-extinguishing units, insulation, or other material on a ship, but excludes the repair or recharge of previously installed systems, equipment, insulation, or other material, or the recharge of portable fire-extinguishing units;

“installed” means a marine diesel engine that is or is intended to be fitted on a ship, including a portable auxiliary marine diesel engine, only if its fuelling, cooling, or exhaust system is an integral part of the ship. A fuelling system is considered integral to the ship only if it is permanently affixed to the ship. This definition includes a marine diesel engine that is used to supplement or augment the installed power capacity of the ship and is intended to be an integral part of the ship;

“International Air Pollution Certificate” means the certificate as provided for in regulations 6, 7, 8 and 9 of these regulations;

“International Maritime Organization” means the organisation established by the convention on the Inter-Governmental Consultative Organisation, adopted by the United Nations

Maritime Conference in Geneva on 6 March 1948, as amended;

“irrational emission control strategy” means any strategy or measure that, when the ship is operated under normal conditions of use, reduces the effectiveness of an emission control system to a level below that expected on the applicable emission test procedures;

“Malta” has the same meaning as is assigned to it in article 124 of the Constitution of Malta;

“Malta Maritime Authority” means the Malta Maritime Authority established by article 3 of the Malta Maritime Authority Act;

“Malta Resources Authority: means the Malta Resources Authority established by article 3 of the Malta Resources Authority Act;

“marine diesel engine” means any reciprocating internal combustion engine operating on liquid or dual fuel, to which regulation 13 hereof applies, including booster/compound systems if applied;

“MARPOL Convention” means the International Convention for the Prevention of Pollution from Ships signed in London on the 2 November, 1973, as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, and any other amendment or Protocol related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization or determined, laid down, prescribed, set or specified by the Registrar-General in terms of these regulations;

“MARPOL Annex I” or “Annex I” means Annex I to the MARPOL Convention: “Regulations for the the Prevention of Pollution by Oil”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“MARPOL Annex II” or “Annex II” means Annex II to the MARPOL Convention: “Regulations for the Control of Pollution by Noxious Liquid Substances”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“MARPOL Annex III” or “Annex III” means Annex III to the MARPOL Convention: “Regulations for the Prevention of Pollution by Harmful Substances in Packaged Form”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“MARPOL Annex IV” or “Annex IV” means Annex IV to the MARPOL Convention: “Regulations for the Prevention of Pollution by Sewage from Ships”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“MARPOL Annex V” or “Annex V” means Annex V to the MARPOL Convention: “Regulations for the Prevention of Pollution by Garbage from Ships”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“MARPOL Annex VI” or “Annex VI” means Annex VI to the MARPOL Convention: “Regulations for the Prevention of Air Pollution from Ships”, including any other amendment related thereto, as may from time to time be ratified, acceded to or accepted by the Government of Malta and other instruments, standards and specifications of a mandatory nature related thereto, adopted or developed by the International Maritime Organization;

“NOx Technical Code” means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by Resolution 2 of the 1997 MARPOL Conference, as amended by the International Maritime Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the MARPOL Convention;

“ozone depleting substances” means controlled substances defined in article 1(4) of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A, B, C or E to the said Protocol in force at the time of application or interpretation of these regulations;

ozone depleting substances that may be found on board ship

include, but are not limited to:

Halon 1211 Bromochlorodifluoromethane

Halon 1301 Bromotrifluoromethane

Halon 2402 1, 2-Dibromo -1, 1, 2, 2-tetrafluoroethane (also known as Halon 114B2)

CFC-11 Trichlorofluoromethane

CFC-12 Dichlorodifluoromethane

CFC-113 1, 1, 2 – Trichloro – 1, 2, 2 – trifluoroethane

CFC-114 1, 2 – Dichloro –1, 1, 2, 2 – tetrafluoroethane

CFC-115 Chloropentafluoroethane;

“Party” or “Parties” means a party or parties to the MARPOL Convention;

“shipboard incineration” means the incineration of wastes or other matter on board a ship, if such wastes or other matter were generated during the normal operation of that ship;

“shipboard incinerator” means a shipboard facility designed for the primary purpose of incineration;

“ships constructed” means ships the keels of which are laid or which are at a similar stage of construction;

“sludge oil” means sludge from the fuel oil or lubricating oil separators, waste lubricating oil from main or auxiliary machinery, or waste oil from bilge water separators, oil filtering equipment or drip trays;

“tanker” means an oil tanker as defined in regulation 1 of MARPOL Annex I or a chemical tanker as defined in regulation 1 of MARPOL Annex II;

“Quality of Fuels Regulations” means the regulations issued under Subsidiary Legislation 423.29, February 2008, which entered into force via Legal Notice 44 of 2008.

(2) Any reference in these regulations to a convention, protocol or annex shall include reference to any amendment to such convention, protocol or annex as from time to time may be ratified, acceded to or accepted by the Government of Malta, and where the context allows, it shall include also reference to any

other instruments, standards and specifications of a mandatory nature related thereto as may from time to time be adopted or developed by the International Maritime Organization.

(3) Unless otherwise defined in these regulations or unless the context otherwise requires, words and expressions used in these regulations shall have the same meaning assigned to them in the MARPOL Convention and its Annexes.

3. (1) Subject to the Quality of Fuels Regulations issued under the Malta Resources Authority Act, these regulations shall apply to all Maltese ships wherever they may be and to all other ships while in Maltese territorial waters.

Exceptions and Exemptions

General

(2) These regulations shall not apply to:

(a) any emission necessary for the purpose of securing the safety of a ship or saving life at sea; or

(b) any emission resulting from damage to a ship or its equipment:

(i) provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the emission for the purpose of preventing or minimising the emission; and

(ii) except if the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result.

(3) The competent authority may, in co-operation with any other authority as appropriate, issue an exemption from specific provisions of these regulations for a ship to conduct trials for the development of ship emission reduction and control technologies and engine design programmes. Such an exemption shall only be provided if the applications of specific provisions of these regulations or the revised NOx Technical Code 2008 could impede research into the development of such technologies or programmes. A permit for such an exemption shall only be provided to the minimum number of ships necessary and be subject to the following provisions:

Trials for Ship Emission Reduction and Control Technology Research

(a) for marine diesel engines with a per cylinder displacement up to 30 litres, the duration of the sea trial shall not exceed 18 months. If additional time is required, the competent authority may permit a renewal for one additional 18-month period; or

(b) for marine diesel engines with a per cylinder displacement at or above 30 litres, the duration of the ship trial shall not exceed 5 years and shall require a progress review by the competent authority at each intermediate survey. A permit may be withdrawn based on this review if the testing has not adhered to the conditions of the permit or if it is determined that the technology or programme is not likely to produce effective results in the reduction and control of ship emissions. If the reviewing authority or authorities determine that additional time is required to conduct a test of a particular technology or programme, a permit may be renewed for an additional time period not to exceed five years.

(4) Emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are, consistent with article 2(3)(b)(ii) of the MARPOL Convention, exempt from the provisions of these regulations. Such emissions include the following:

Emissions from
Sea-bed
Mineral
Activities

(a) emissions resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to the flaring of hydrocarbons and the burning of cuttings, muds, and/or stimulation fluids during well completion and testing operations, and flaring arising from upset conditions;

(b) the release of gases and volatile compounds entrained in drilling fluids and cuttings;

(c) emissions associated solely and directly with the treatment, handling, or storage of sea-bed minerals; and

(d) emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of sea-bed mineral resources.

Provided that the requirements of regulation 18 hereof shall not apply to the use of hydrocarbons which are produced and subsequently used on site as fuel, when approved by the competent authority.

4. (1) The competent authority may allow any fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by these regulations if such fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods are at least as effective in terms of

Equivalents

emissions reductions as that required by these regulations, including any of the standards set forth in regulations 13 and 14 hereof.

(2) In the event that the competent authority allows a fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by these regulations, it shall communicate to the International Maritime Organization for circulation to all Parties of MARPOL Annex VI the particulars thereof, for their information and appropriate action, if any.

(3) The competent authority should take into account any relevant guidelines developed by the International Maritime Organization pertaining to the equivalents provided for in this regulation 4.

(4) The competent authority, when allowing the use of an equivalent as set forth in subregulation (1) hereof shall endeavour not to impair or damage its environment, human health, property, or resources or those of other States.

5. (1) Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below: **Surveys**

(a) An initial survey before the ship is put into service or before the certificate required under regulation 6 hereof is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of these regulations;

(b) A renewal survey at intervals specified by the competent authority, but not exceeding five years, except where regulation 9(2), 9(5), 9(6) or 9(7) hereof is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of these regulations;

(c) An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate which shall take the place of one of the annual surveys

²⁰ Refer to the Guidelines for the authorisation of organisations acting on behalf of the competent authority, adopted by the International Maritime Organization by Resolution A.739 (18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognised organisations acting on behalf of the competent authority, adopted by the International Maritime Organization by Resolution A.789(19), as may be amended by the Organization.

specified under regulation 5(1)(d) hereof. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of these regulations and are in good working order. Such intermediate surveys shall be endorsed on the certificate issued under regulation 6 or 7 hereof;

(d) An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in regulation 5(1)(a) hereof to ensure that they have been maintained in accordance with regulation 5(4) hereof and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the certificate issued under regulation 6 or 7 hereof; and

(e) An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in regulation 5(4) hereof or after a repair resulting from investigations prescribed in regulation 5(5) hereof. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the ship complies in all respects with the requirements of these regulations.

(2) In the case of ships of less than 400 gross tonnage, the competent authority may establish appropriate measures in order to ensure that the applicable provisions of these regulations are complied with.

(3) Surveys of ships as regards the enforcement of the provisions of these regulations shall be carried out by officers of the competent authority.

(a) The competent authority may, however, entrust the surveys either to surveyors nominated for the purpose or to organisations recognised by it. Such organisations shall comply with the guidelines adopted by the International Maritime Organization²⁰;

(b) The survey of marine diesel engines and equipment for compliance with regulation 13 hereof shall be conducted in accordance with the revised NOx Technical Code 2008;

(c) When a nominated surveyor or recognised organisation determines that the condition of the equipment does not

correspond substantially with the particulars of the certificate, they shall ensure that corrective action is taken and shall in due course notify the competent authority. If such corrective action is not taken, the certificate shall be withdrawn by the competent authority. If the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the competent authority, a nominated surveyor or recognised organisation has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor or organisation any necessary assistance to carry out their obligations under this regulation; and

(d) In every case, the competent authority shall fully guarantee the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation.

(4) The equipment shall be maintained to conform with the provisions of these regulations and no changes shall be made in the equipment, systems, fittings, arrangements, or material covered by the survey, without the express approval of the competent authority. The direct replacement of such equipment and fittings with equipment and fittings that conform with the provisions of these regulations is permitted.

(5) Whenever an accident occurs to a ship or a defect is discovered which substantially affects the efficiency or completeness of its equipment covered by these regulations, the master or owner of the ship shall report at the earliest opportunity to the competent authority, a nominated surveyor, or recognised organisation responsible for issuing the relevant certificate.

6. (1) An International Air Pollution Prevention Certificate shall be issued after an initial or renewal survey in accordance with the provisions of regulation 5 hereof, to:

**International
Air Pollution
Prevention
Certificate**

(a) any ship of 400 gross tonnage and above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties; and

(b) platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties.

(2) A ship constructed before the date of entry into force of MARPOL Annex VI shall be issued with an International Air Pollution Prevention Certificate by the competent authority in accordance with regulation 6(1) hereof no later than the first

scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date.

(3) Such certificate shall be issued or endorsed either by the competent authority or by any person or organisation duly authorised by it. In every case, the competent authority assumes full responsibility for the certificate.

7. (1) The competent authority may cause a ship to be surveyed and, if satisfied that the provisions of these regulations are complied with, shall issue or authorise the issuance of an International Air Pollution Prevention Certificate to the ship, and where appropriate, endorse or authorise the endorsement of that certificate on the ship, in accordance with these regulations.

**Issuance of
International
Air Pollution
Prevention
Certificate**

(2) A copy of the certificate and a copy of the survey report shall be transmitted as soon as possible to the competent authority.

(3) A certificate so issued shall contain a statement to the effect that it has been issued at the request of the competent authority and it shall have the same force and receive the same recognition as a certificate issued under regulation 6 hereof.

(4) No International Air Pollution Prevention Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party to Annex VI.

8. The International Air Pollution Prevention Certificate shall be drawn up in a form corresponding to the model given in schedule I to these regulations and shall be drawn up or at least translated in the English, French or Spanish language.

**Form of
Certificate**

If an official language of the issuing country other than English, French or Spanish is also used, this shall prevail in case of a dispute or discrepancy.

9. (1) An International Air Pollution Prevention Certificate shall be issued for a period specified by the competent authority, which shall not exceed five years.

**Duration and
Validity of
Certificate**

(2) Notwithstanding the requirements of subregulation (1) hereof:

(a) when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate;

(b) when the renewal survey is completed after the expiry

date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate; and

(c) when the renewal survey is completed more than three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.

(3) If a certificate is issued for a period of less than five years, the competent authority may extend the validity of the certificate beyond the expiry date to the maximum period specified in subregulation (1) hereof, provided that the surveys referred to in regulations 5(1)(c) and 5(1)(d) hereof applicable when a certificate is issued for a period of five years are carried out as appropriate.

(4) If a renewal survey has been completed and a new certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the person or organisation authorised by the competent authority may endorse the existing certificate and such a certificate shall be accepted as valid for a further period which shall not exceed five months from the expiry date.

(5) If a ship, at the time when a certificate expires, is not in a port in which it is to be surveyed, the competent authority may extend the period of validity of the certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No certificate shall be extended for a period longer than three months, and a ship to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

(6) A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the competent authority for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

(7) In special circumstances, as determined by the competent authority, a new certificate need not be dated from the date of expiry of the existing certificate as required by subregulations (2)(a), (5) or (6) hereof. In these special circumstances, the new certificate shall be valid to a date not exceeding five years from the date of completion of the renewal survey.

(8) If an annual or intermediate survey is completed before the period specified in regulation 5, then:

(a) the anniversary date shown on the certificate shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed;

(b) the subsequent annual or intermediate survey required by regulation 5 hereof shall be completed at the intervals prescribed by that regulation using the new anniversary date; and

(c) the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by regulation 5 hereof are not exceeded.

(9) A certificate issued under regulation 6 or 7 hereof shall cease to be valid in any of the following cases:

(a) if the relevant surveys are not completed within the periods specified under regulation 5(1) hereof;

(b) if the certificate is not endorsed in accordance with regulation 5(1)(c) or 5(1)(d) hereof; and

(c) upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulation 5(4) hereof. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the competent authority copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports.

10. (1) A Maltese ship, when in a port or an offshore terminal under the jurisdiction of another Party, is subject to inspection by officers duly authorised by such Party concerning operational requirements under these regulations, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from ships.

**Port State
Control on
Operational
Requirements**

(2) In the circumstances given in subregulation (1) hereof, the Party's authority concerned shall take such steps as to ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of these regulations.

(3) Procedures relating to the port State control prescribed in article 5 of the MARPOL Convention shall apply to this regulation.

(4) Nothing in this regulation shall be construed to limit the rights and obligations of the competent authority carrying out control over operational requirements specifically provided for in the present Convention.

11. (1) The competent authority shall co-operate with other Party authorities in the detection of violations and the enforcement of the provisions of these regulations, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

**Detection of
Violations and
Enforcement**

(2) A Maltese ship may, while in any port or offshore terminal of a Party, be subject to inspection by officers appointed or authorised by the competent authority or for the purpose of verifying whether the ship has emitted any of the substances covered by these regulations in violation of the provision of these regulations. If an inspection indicates a violation of these regulations, a report shall be forwarded to the competent authority for any appropriate action.

(3) Any Party shall furnish to the competent authority evidence, if any, that the ship has emitted any of the substances covered by these regulations in violation of the provisions of these regulations. If it is practicable to do so, the authorities of the former Party shall notify the master of the ship of the alleged violation.

(4) Upon receiving such evidence, the competent authority so informed shall investigate the matter, and may request the other Party to furnish further or better evidence of the alleged contravention. If the competent authority is satisfied that sufficient evidence is available to enable proceedings to be

brought in respect of the alleged violation, it shall cause such proceedings to be taken in accordance with its law as soon as possible. The competent authority shall promptly inform the Party which has reported the alleged violation, as well as the International Maritime Organization, of the action taken.

(5) The competent authority may also inspect a ship to which these regulations apply when it enters the ports or offshore terminals under its jurisdiction, if a request for an investigation is received from any Party together with sufficient evidence that the ship has emitted any of the substances covered by these regulations in any place in violation of these regulations. The report of such investigation shall be sent to the Party requesting it so that the appropriate action may be taken under the MARPOL Convention.

(6) The international law concerning the prevention, reduction, and control of pollution of the marine environment from ships, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of these regulations, applies, mutatis mutandis, to the rules and standards set forth in these regulations.

12. (1) This regulation does not apply to permanently sealed equipment where there are no refrigerant charging connections or potentially removable components containing ozone depleting substances.

**Ozone
Depleting
Substances**

(2) Subject to the provisions of regulation 3(1) hereof, any deliberate emissions of ozone depleting substances shall be prohibited. Deliberate emissions include emissions occurring in the course of maintaining, servicing, repairing or disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with the recapture or recycling of an ozone depleting substance. Emissions arising from leaks of an ozone depleting substance, whether or not the leaks are deliberate, may be regulated by the competent authority.

- (3) (a) Installations which contain ozone depleting substances, other than hydro-chlorofluorocarbons, shall be prohibited:
- (i) on ships constructed on or after 19 May 2005; or
 - (ii) in the case of ships constructed before 19 May 2005, which have a contractual delivery date of the equipment to the ship on or after 19 May 2005 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on

or after 19 May 2005.

(b) Installations which contain hydro-chlorofluorocarbons shall be prohibited:

(i) on ships constructed on or after 1 January 2020; or

(ii) in the case of ships constructed before 1 January 2020, which have a contractual delivery date of the equipment to the ship on or after 1 January 2020 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2020.

(4) The substances referred to in this regulation, and equipment containing such substances, shall be delivered to appropriate reception facilities when removed from ships.

(5) Each ship subject to regulation 6(1) hereof shall maintain a list of equipment containing ozone depleting substances²¹.

(6) Each ship subject to regulation 6(1) hereof which has rechargeable systems that contain ozone depleting substances shall maintain an Ozone Depleting Substances Record Book. This Record Book may form part of an existing log-book or electronic recording system as approved by the competent authority.

(7) Entries in the Ozone Depleting Substances Record Book shall be recorded in terms of mass (kg) of substance and shall be completed without delay on each occasion, in respect of the following:

(a) recharge, full or partial, of equipment containing ozone depleting substances;

(b) repair or maintenance of equipment containing ozone depleting substances;

(c) discharge of ozone depleting substances to the atmosphere;

(d) deliberate; and

(e) non-deliberate;

²¹ See Schedule I, Supplement to International Air Pollution Prevention Certificate (IAPP Certificate), section 2.1.

(f) discharge of ozone depleting substances to land-based reception facilities; and

(g) supply of ozone depleting substances to the ship.

13. (1) (a) This regulation shall apply to:

**Nitrogen
Oxides (NO_x)**

(i) each marine diesel engine with a power output of more than 130 kW installed on a ship; and

(ii) each marine diesel engine with a power output of more than 130 kW which undergoes a major conversion on or after 1 January 2000 except when demonstrated to the satisfaction of the competent authority that such engine is an identical replacement to the engine which it is replacing and is otherwise not covered under subregulation (1)(a)(i) hereof.

(b) This regulation does not apply to:

(i) a marine diesel engine intended to be used solely for emergencies, or solely to power any device or equipment intended to be used solely for emergencies on the ship on which it is installed, or a marine diesel engine installed in lifeboats intended to be used solely for emergencies; and

(ii) a marine diesel engine installed on a ship solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly, provided that such engine is subject to an alternative NO_x control measure established by the competent authority.

(c) Notwithstanding the provisions of subregulation (1)(a) hereof, the competent authority may provide an exclusion from the application of this regulation for any marine diesel engine which is installed on a ship constructed, or for any marine diesel engine which undergoes a major conversion, before 19 May 2005, provided that the ship on which the engine is installed is solely engaged in voyages to ports or offshore terminals within the State the flag of which the ship is entitled to fly.

(2) (a) For the purpose of this regulation, major conversion means a modification on or after 1 January 2000 of a marine diesel engine that has not already been certified to the standards set forth in subregulations (3),(4), or (5)(a)(i)

Major
Conversion

hereof where:

(i) the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed, or

(ii) any substantial modification, as defined in the revised NO_x Technical Code 2008, is made to the engine, or

(iii) the maximum continuous rating of the engine is increased by more than 10% compared to the maximum continuous rating of the original certification of the engine.

(b) For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine or the installation of an additional marine diesel engine, the standards in this regulation in force at the time of the replacement or addition of the engine shall apply. On or after 1 January 2016, in the case of replacement engines only, if it is not possible for such a replacement engine to meet the standards set forth in subregulation (5)(a)(i) hereof (Tier III), then that replacement engine shall meet the standards set forth in subregulation (4) hereof (Tier II). Guidelines are to be developed by the International Maritime Organization to set forth the criteria of when it is not possible for a replacement engine to meet the standards in subregulation (5)(a)(i) hereof.

(c) A marine diesel engine referred to in subregulation (2)(a)(ii) or (2)(a)(iii) hereof shall meet the following standards:

(i) for ships constructed prior to 1 January 2000, the standards set forth in subregulation (3) hereof shall apply; and

(ii) for ships constructed on or after 1 January 2000, the standards in force at the time the ship was constructed shall apply.

(3) Subject to regulation 3 hereof, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2000 and prior to 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO₂) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute): Tier 1

- (a) 17.0 g/kWh when n is less than 130 rpm;
- (b) $45 \cdot n(-0.2)$ g/kWh when n is 130 or more but less than 2,000 rpm;
- (c) 9.8 g/kWh when n is 2,000 rpm or more.

(4) Subject to regulation 3 hereof, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO₂) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute): Tier II

- (a) 14.4 g/kWh when n is less than 130 rpm;
- (b) $44 \cdot n(-0.23)$ g/kWh when n is 130 or more but less than 2,000 rpm;
- (c) 7.7 g/kWh when n is 2,000 rpm or more.

(5) (a) Subject to regulation 3 hereof, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2016, Tier III

(i) is prohibited except when the emission of nitrogen oxides (calculated as the total weighted emission of NO₂) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

1. 3.4 g/kWh when n is less than 130 rpm;
2. $9 \cdot n(-0.2)$ g/kWh when n is 130 or more but less than 2,000 rpm; and
3. 2.0 g/kWh when n is 2,000 rpm or more;

(ii) is subject to the standards set forth in subregulation (5)(a)(i) hereof when the ship is operating in an Emission Control Area designated under subregulation 6 hereof; and

(iii) is subject to the standards set forth in subregulation (4) of this regulation when the ship is operating outside of an Emission Control Area designated under regulation 6 hereof.

(b) Subject to the review set forth in subregulation 10 hereof, the standards set forth in subregulation (5)(a)(i) hereof shall not apply to:

- (i) a marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the MARPOL Convention, less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or
- (ii) a marine diesel engine installed on a ship with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the competent authority, that the ship cannot comply with the standards set forth in subregulation (5)(a)(i) hereof because of design or construction limitations of the ship.

(6) For the purpose of this regulation, an Emission Control Area shall be any sea area, including any port area, designated by the International Maritime Organization in accordance with the criteria and procedures set forth in schedule III to these regulations.

Emission
Control Area

(7) (a) Notwithstanding subregulation (1)(a)(i) hereof, a marine diesel engine 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 shall comply with the emission limits set forth in subregulation (7)(d) hereof, provided that an Approved Method for that engine has been certified by the competent authority and notification of such certification has been submitted to the International Maritime Organization by the competent authority. Compliance with this subregulation shall be demonstrated through one of the following:

Marine Diesel
Engines
Installed on a
Ship
constructed
prior 1 January
2000

- (i) installation of the certified Approved Method, as confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method; or
- (ii) certification of the engine confirming that it operates within the limits set forth in subregulation (3), (4), or (5)(a)(i) hereof and an appropriate notation of the engine certification on the ship's International Air Pollution Prevention Certificate.

(b) Subregulation (7)(a) hereof shall apply no later than the first renewal survey that occurs 12 months or more after deposit of the notification in subregulation (7)(a). If a shipowner of a ship on which an Approved Method is to be installed can demonstrate to the satisfaction of the competent authority that the Approved Method was not commercially available despite best efforts to obtain it, then that Approved Method shall be installed on the ship no later than the next annual survey of that ship which falls after the Approved Method is commercially available.

(c) With regard to a ship with a marine diesel engine 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, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which subregulation (7)(a) hereof, indicate that either an Approved Method has been applied pursuant to subregulation (7)(a)(i) hereof or the engine has been certified pursuant to subregulation (7)(a)(ii) hereof or that an Approved Method does not yet exist or is not yet commercially available as described in subregulation (7)(b) hereof.

(d) Subject to regulation 3 hereof, the operation of a marine diesel engine described in subregulation (7)(a) is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO₂) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

(i) 17.0 g/kWh when n is less than 130 rpm;

(ii) $45 \cdot n(-0.2)$ g/kWh when n is 130 or more but less than 2,000 rpm; and

(iii) 9.8 g/kWh when n is 2,000 rpm or more.

(e) Certification of an Approved Method shall be in accordance with chapter 7 of the revised NO_x Technical Code 2008 and shall include verification:

(i) by the designer of the base marine diesel engine to which the Approved Method applies that the calculated effect of the Approved Method will not decrease engine rating by more than 1.0%, increase fuel consumption by more than 2.0% as measured according to the appropriate test cycle

set forth in the revised NOx Technical Code 2008, or adversely affect engine durability or reliability; and

(ii) that the cost of the Approved Method is not excessive, which is determined by a comparison of the amount of NOx reduced by the Approved Method to achieve the standard set forth in subregulation (7)(d) hereof and the cost of purchasing and installing such Approved Method²².

(8) The revised NOx Technical Code 2008 shall be applied in the certification, testing, and measurement procedures for the standards set forth in this regulation. Certification

(9) The procedures for determining NOx emissions set out in the revised NOx Technical Code 2008 are intended to be representative of the normal operation of the engine. Defeat devices and irrational emission control strategies undermine this intention and shall not be allowed. This regulation shall not prevent the use of auxiliary control devices that are used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure or that are used to facilitate the starting of the engine.

14. Save as otherwise provided, nothing in the present regulation shall be construed as affecting regulations 9, 10, 11 and 12 of the Quality of Fuels Regulations²³, in respect of the maximum sulphur content of marine fuels used in SOx Emission Control Areas and by passenger ships operating on regular services to or from European Community ports as set and defined by such aforementioned regulations. **Sulphur Oxides (SOx) and Particulate Matter**

²² The cost of an Approved Method shall not exceed 375 Special Drawing Rights/metric ton NOx calculated in accordance with the Cost-Effectiveness formula below:

$$C_e = \frac{\text{Cost of Approved Method} \cdot 106}{P(\text{kW}) \cdot 0.768 \cdot 6000(\text{hours/year}) \cdot 5 (\text{years}) \cdot \Delta \text{NOx}(\text{g/kWh})}$$

²³ Quality Fuels Regulations, Subsidiary Legislation 423.29, 1st February 2008 (Legal notice 44 of 2008).

(1) The sulphur content of any fuel oil used on board ships shall not exceed the following limits: General Requirements

- (a) 4.50% m/m prior to 1 January 2012;
- (b) 3.50% m/m on and after 1 January 2012; and
- (c) 0.50% m/m on and after 1 January 2020.

(2) The worldwide average sulphur content of residual fuel oil supplied for use on board ships shall be monitored taking into account guidelines developed by the International Maritime Organization²⁴.

(3) For the purpose of this regulation, Emission Control Areas shall include: Requirements

- (a) the Baltic Sea area as defined in regulation 1.11.2 of Annex I, the North Sea as defined in regulation 5(1)(f) of Annex V; and
- (d) any other sea area, including port areas, designated by the International Maritime Organization in accordance with criteria and procedures set forth in schedule III to these regulations.

(4) While ships are operating within an Emission Control Area, the sulphur content of fuel oil used on board ships shall not exceed the following limits:

- (a) 1.50% m/m prior to 1 July 2010;
- (b) 1.00% m/m on and after 1 July 2010; and
- (c) 0.10% m/m on and after 1 January 2015.

(5) The sulphur content of fuel oil referred to in subregulations (1) and (4) hereof shall be documented by its supplier as required by regulation 18 of these regulations.

(6) Those ships using separate fuel oils to comply with subregulation (4) hereof and entering or leaving an Emission Control Area set forth in subregulation (3) hereof shall carry a written procedure showing how the fuel oil change-over is to be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable sulphur content specified in subregulation (4) hereof prior to entry into an Emission Control Area. The volume of low sulphur fuel oils in

²⁴ MEPC.82(43), "Guidelines for Monitoring the World-wide Average Sulphur Content of Residual Fuel Oils"

each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an Emission Control Area or commenced after exit from such an area, shall be recorded in such log-book as prescribed by the competent authority.

(7) During the first twelve months immediately following an amendment designating a specific Emission Control Area under subregulation (3)(b) hereof, ships operating in that Emission Control Area are exempt from the requirements in subregulations (4) and (6) hereof and from the requirements of subregulation (5) hereof insofar as they relate to subregulation (4) hereof.

15. (1) If the emissions of VOCs from a tanker are to be regulated in a port or ports or a terminal or terminals under the jurisdiction of Malta, they shall be regulated in accordance with the provisions of this regulation.

**Volatile
Organic
Compounds
(VOCs)**

(2) Where the competent authority regulates tankers for VOC emissions, it shall submit a notification to the International Maritime Organization. This notification shall include information on the size of tankers to be controlled, the cargoes requiring vapour emission control systems, and the effective date of such control, and shall be submitted at least six months before the effective date.

(3) Where the competent authority designates ports or terminals at which VOCs emissions from tankers are to be regulated, it shall ensure that vapour emission control systems, taking into account the safety standards for such systems developed by the International Maritime Organization, are provided in any designated port and terminal and are operated safely and in a manner so as to avoid undue delay to a ship.

(4) The International Maritime Organization shall circulate a list of the ports and terminals designated by Parties to other Parties and Member States of the International Maritime Organization for their information.

(5) A tanker to which subregulation (1) hereof applies shall be provided with a vapour emission collection system approved by the competent authority taking into account the safety standards for such systems developed by the International Maritime Organization²⁵, and shall use this system during the loading of

²⁵ MSC/Circ.585, Standards for vapour emission control systems.

²⁶ Resolution MEPC [xx](58), "Guidelines for the Development of a VOC Management Plan".

²⁷ MSC.30(61), "International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk", chapter 5.

relevant cargoes. A port or terminal which has installed vapour emission control systems in accordance with this regulation may accept tankers which are not fitted with vapour collection systems for a period of three years after the effective date identified in subregulation (2) hereof.

(6) A tanker carrying crude oil shall have on board and implement a VOC Management Plan approved by the competent authority. Such a plan shall be prepared taking into account the guidelines developed by the International Maritime Organization²⁶. The plan shall be specific to each ship and shall at least:

- (a) provide written procedures for minimising VOC emissions during the loading, sea passage and discharge of cargo;
- (b) give consideration to the additional VOC generated by crude oil washing;
- (c) identify a person responsible for implementing the plan; and
- (d) for ships on international voyages, be written in the working language of the master and officers and, if the working language of the master and officers is not English, French, or Spanish, include a translation into one of these languages.

(7) This regulation shall also apply to gas carriers only if the type of loading and containment systems allow safe retention of non-methane VOCs on board or their safe return ashore²⁷.

16. (1) Except as provided in subregulation (4) hereof, shipboard incineration shall be allowed only in a shipboard incinerator. **Shipboard Incineration**

(2) Shipboard incineration of the following substances shall be prohibited:

- (a) residues of cargoes subject to Annex I, II or III or related contaminated packing materials;
- (b) polychlorinated biphenyls (PCBs);
- (c) garbage, as defined by Annex V, containing more

²⁸ Type Approval Certificates issued in accordance with Resolution MEPC.59(33) or MEPC.76(40).

²⁹ Refer to Resolution MEPC.76(40), Standard specification for shipboard incinerators.

than traces of heavy metals;

(d) refined petroleum products containing halogen compounds;

(e) sewage sludge and sludge oil either of which are not generated on board the ship; and

(f) exhaust gas cleaning system residues.

(3) Shipboard incineration of polyvinyl chlorides (PVCs) shall be prohibited, except in shipboard incinerator for which an IMO Type Approval Certificates²⁸ has been issued.

(4) Shipboard incineration of sewage sludge and sludge oil generated during normal operation of a ship may also take place in the main or auxiliary power plant or boilers, but in those cases, shall not take place inside ports, harbours and estuaries.

(5) Nothing in this regulation neither:

(a) affects the prohibition in, or other requirements of, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended, and the 1996 Protocol thereto, nor

(b) precludes the development, installation and operation of alternative design shipboard thermal waste treatment devices that meet or exceed the requirements of this regulation.

(6) (a) Except as provided in subregulation (6)(b) hereof, each incinerator on a ship constructed on or after 1 January 2000 or incinerator which is installed on board a ship on or after 1 January 2000 shall meet the requirements contained in schedule IV to these regulations. Each incinerator subject to this subregulation shall be approved by the competent authority taking into account the standard specification for shipboard incinerators developed by the International Maritime Organization²⁹; or

(b) The competent authority may allow exclusion from the application of subregulation (6)(a) hereof to any incinerator which is installed on board a ship before 19 May 2005, provided that the ship is solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.

(7) Incinerators installed in accordance with the requirements of subregulation (6)(a) hereof shall be provided with a manufacturer's operating manual which is to be retained with the unit and which shall specify how to operate the incinerator within the limits described in paragraph 2 of schedule IV of these regulations.

(8) Personnel responsible for the operation of an incinerator installed in accordance with the requirements of subregulation (6)(a) hereof shall be trained to implement the guidance provided in the manufacturer's operating manual as required by subregulation (7) hereof.

(9) For incinerators installed in accordance with the requirements of subregulation (6)(a) hereof the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation. Where that incinerator is of the continuous-feed type, waste shall not be fed into the unit when the combustion chamber gas outlet temperature is below 850°C. Where that incinerator is of the batch-loaded type, the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C.

17. (1) The competent authority shall undertake to ensure the provision of facilities adequate to meet the:

**Reception
Facilities**

- (a) needs of ships using its repair ports for the reception of ozone depleting substances and equipment containing such substances when removed from ships;
- (b) needs of ships using its ports, terminals or repair ports for the reception of exhaust gas cleaning residues from an exhaust gas cleaning system, without causing undue delay to ships; and
- (c) needs in ship-breaking facilities for the reception of ozone depleting substances and equipment containing such substances when removed from ships.

(2) If a particular port or terminal in Malta— taking into account the guidelines to be developed by the International Maritime Organization – remotely located from, or lacking in, the industrial infrastructure necessary to manage and process those substances referred to in subregulation (1) hereof and therefore cannot accept such substances, then the competent authority shall inform the International Maritime Organization of any such port or terminal so that this information may be circulated to all Parties and Member States of the International Maritime Organization for their information and any appropriate action. After providing the

International Maritime Organization with such information, the competent authority shall also notify the International Maritime Organization of its ports and terminals where reception facilities are available to manage and process such substances.

(3) The competent authority shall notify the International Maritime Organization for transmission to the Members of the International Maritime Organization of all cases where the facilities provided under this regulation are unavailable or alleged to be inadequate.

18. (1) The competent authority in co-operation with the Malta Resources Authority shall take all reasonable steps to promote the availability of fuel oils which comply with these regulations and inform the International Maritime Organization of the availability of compliant fuel oils in its ports and terminals.

**Fuel Oil
Availability &
Quality**

(2) (a) If a ship is found by the competent authority not to be in compliance with the standards for compliant fuel oils set forth in these regulations, the competent authority is entitled to require the ship to:

(i) present a record of the actions taken to attempt to achieve compliance; and

(ii) provide evidence that it 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.

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

(c) If a ship provides the information set forth in subregulation (2)(a) hereof, the competent authority shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

(d) A Maltese ship shall notify the competent authority of the relevant port of destination when it cannot purchase compliant fuel oil.

(e) The competent authority shall notify the International Maritime Organization when a Maltese ship has presented evidence of the non-availability of compliant fuel oil.

(3) (a) Fuel oil for combustion purposes delivered to and used on board ships to which these regulations applies shall meet the following requirements, except as provided in subregulation (3)(b) hereof:

(i) the fuel oil shall be blends of hydrocarbons derived from petroleum refining. This shall not preclude the incorporation of small amounts of additives intended to improve some aspects of performance;

(ii) the fuel oil shall be free from inorganic acid; and

(iii) the fuel oil shall not include any added substance or chemical waste which:

1. jeopardizes the safety of ships or adversely affects the performance of the machinery, or
2. is harmful to personnel, or
3. contributes overall to additional air pollution.

(b) fuel oil for combustion purposes derived by methods other than petroleum refining shall not:

(i) exceed the applicable sulphur content set forth in regulation 14 of these regulations;

(ii) cause an engine to exceed the applicable NO_x emission limit set forth in subregulations (3),(4),(5)(a)(i) and (7)(d) of regulation 13;

(iii) contain inorganic acid; or

(iv) jeopardize the safety of ships or adversely affect the performance of the machinery, or, be harmful to personnel, or, contribute overall to additional air pollution.

(4) This regulation does not apply to coal in its solid form or nuclear fuels. Subregulations (5),(6), (7)(a), (7)(b), (8)(a), (8)(b), (9)(b), (9)(c) and (9)(d) hereof do not apply to gas fuels such as Liquefied Natural Gas, Compressed Natural Gas or Liquefied Petroleum Gas. The sulphur content of gas fuels delivered to a

³⁰ Refer to MEPC.96(47), "Guidelines for the Sampling of Fuel Oil for Determination of Compliance with MARPOL Annex VI.

ship specifically for combustion purposes on board that ship shall be documented by the supplier.

(5) For each ship subject to regulations 5 and 6 hereof, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in schedule V to these regulations.

(6) The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board.

(7) (a) The competent authority may inspect the bunker delivery notes on board any ship to which these regulations apply while the ship is in its port or offshore terminal, may make a copy of each delivery note, and may require the master or person in charge of the ship to certify that each copy is a true copy of such bunker delivery note. The competent authority may also verify the contents of each note through consultations with the port where the note was issued.

(b) The inspection of the bunker delivery notes and the taking of certified copies by the competent authority under this subregulation shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

(8) (a) The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines developed by the International Maritime Organization³⁰. The sample is to be sealed and signed by the supplier's representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the ship's control until the fuel oil is substantially consumed, but in any case for a period of not less than 12 months from the time of delivery.

(b) If the competent authority requires the representative sample to be analysed, it shall be done in accordance with the verification procedure set forth in Schedule VI to determine whether the fuel oil meets the requirements of these regulations.

(9) Parties undertake to ensure that appropriate authorities designated by them:

(a) maintain a register of local suppliers of fuel oil;

(b) require local suppliers to provide the bunker delivery note and sample as required by this regulation, certified by the fuel oil supplier that the fuel oil meets the requirements of regulations 14 and 18 hereof;

(c) require local suppliers to retain a copy of the bunker delivery note for at least three years for inspection and verification by the port State as necessary;

(d) take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note;

(e) inform the competent authority of any ship receiving fuel oil found to be non-compliant with the requirements of regulation 14 or 18 hereof; and

(f) inform the International Maritime Organization for transmission to Parties and Member States of the International Maritime Organization of all cases where fuel oil suppliers have failed to meet the requirements specified in regulations 14 or 18 hereof.

(10) In connection with port State inspections carried out by the competent authority, the competent authority shall further undertake to:

(a) inform the Party or non-Party under whose jurisdiction a bunker delivery note was issued of cases of delivery of noncompliant fuel oil, giving all relevant information; and

(b) ensure that remedial action as appropriate is taken to bring noncompliant fuel oil discovered into compliance.

(11) For every ship of 400 gross tonnage and above on scheduled services with frequent and regular port calls, the competent authority may decide after application and consultation with affected States that compliance with subregulation (6) hereof may be documented in an alternative manner which gives similar certainty of compliance with regulations 14 and 18 hereof.

19. (1) Any person shall be guilty of an offence under these regulations if:

Criminal Offences

(a) he fails to comply with any provision of these regulations or with any order lawfully given in terms of any provision of these regulations; or

(b) he conspires with or aids, or abets, any other person by

whatever means, not to comply with any provision of these regulations, or with any order lawfully given in terms of any provision of these regulations.

(2) Any person who commits an offence against these regulations shall, on conviction and unless otherwise specifically provided elsewhere in these regulations, be liable to a fine (*multa*) of not less than _____ euro or to imprisonment for a term not exceeding _____ months, or to both such fine or imprisonment.

Provided that the court shall order any person who has been found guilty of committing an offence against these regulations to pay for the expenses incurred by the public entities and, or other persons acting on their behalf, the revocation of the permit issued by the public entity whichever it may be, and the confiscation of the *corpus delicti*.

(3) The provisions of articles 23 and 30(1) of the Criminal Code shall, mutatis mutandis, apply to proceedings, in respect of offences against these regulations, so however that the disqualification from holding or obtaining a licence, permit or authority shall in no case be for less than one year.

(4) Notwithstanding the provisions of article 370 of the Criminal Code, proceedings for an offence against these regulations shall be taken before the Court of Magistrates (Malta) or the Court of Magistrates (Gozo), as the case may be, and shall be in accordance with the provisions of the Criminal Code regulating the procedure before the said courts of criminal judicature.

(5) Notwithstanding the provisions of the Criminal Code, the Attorney General shall always have a right of appeal to the Court of Criminal Appeal from any judgment given by the Court of Magistrates (Malta) or the Court of Magistrates (Gozo) in respect of proceedings for any offence against these regulations.

20. The competent authority may impose an administrative fine upon any person who infringes any provision of these regulations or who fails to comply with any directive or decision given by the competent authority in ensuring compliance with these regulations.

Administrative Fines

SCHEDULE I

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

INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by Resolution MEPC.xx(58) in 2008, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as “the Convention”) under the authority of the Government of:

.....
(full designation of the country)
by
.....
*(full designation of the competent person or organisation
authorised under the provisions of the Convention)*

Particulars of ship*

Name of ship.....
Distinctive number or letters.....
Port of registry.....
Gross tonnage.....
IMO Number**

* Alternatively, the particulars of the ship may be placed horizontally in boxes.

** In accordance with IMO ship identification number scheme, adopted by the Organization by Resolution A.600(15).

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with regulation 5 of MARPOL Annex VI of the Convention; and
2. That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of Annex VI of the Convention.

Completion date of survey on which this Certificate is based:
(dd/mm/yyyy)

This Certificate is valid until* subject to surveys
in accordance with regulation 5 of Annex VI of the Convention.

Issued at

.....
(Place of issue of certificate)

(dd/mm/yyyy):

.....
(Date of issue)

.....
*(Signature of authorised official
issuing the certificate)*

(Seal or stamp of the authority, as appropriate)

* Insert the date of expiry as specified by the competent authority in accordance with regulation 9.1 of MARPOL Annex VI. The day and the month of this date correspond to the anniversary date as defined in regulation 2.3 of MARPOL Annex VI, unless amended in accordance with regulation 9.8 of Annex VI of the Convention.

Endorsement for annual and intermediate surveys

THIS IS TO CERTIFY that at a survey required by regulation 5 of Annex VI of the Convention the ship was found to comply with the relevant provisions of that Annex:

Annual survey: Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey: Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey: Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Annual survey: Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

* Delete as appropriate.

Annual/intermediate survey in accordance with regulation 9.8.3

THIS IS TO CERTIFY that, at an annual/intermediate* survey in accordance with regulation 9.8.3 of Annex VI of the Convention, the ship was found to comply with the relevant provisions of that Annex:

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Endorsement to extend the certificate if valid for less than 5 years where regulation 9.3 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.3 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy):.....

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Endorsement where the renewal survey has been completed and regulation 9.4 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.4 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy):
.....

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation 9.5 or 9.6 applies

This certificate shall, in accordance with regulation 9.5 or 9.6* of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy):.....

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

Endorsement for advancement of anniversary date where regulation 9.8 applies

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy):

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy):

Signed:
(Signature of authorised official)

Place:

Date (dd/mm/yyyy):

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

**SUPPLEMENT TO
INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE
(IAPP CERTIFICATE)
RECORD OF CONSTRUCTION AND EQUIPMENT**

Notes:
 1 This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.
 2 The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
 3 Entries in boxes shall be made by inserting either a cross (x) for the answer “yes” and “applicable” or a (-) for the answers “no” and “not applicable” as appropriate.
 4 Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship

1.2 IMO number

1.3 Date on which keel was laid or ship was at a similar stage of construction

1.4 Length (L) # metres

Completed only in respect of ships constructed on or after 1 January 2016, which are specially designed, and used solely, for recreational purposes and to which, in accordance with regulation 13.5.2.1, the NO_x emission limit as given by regulation 13.5.1.1 will not apply.

2 Control of emissions from ships

2.1 Ozone depleting substances (regulation 12)

2.1.1 The following fire-extinguishing systems, other systems and equipment containing ozone depleting substances, other than hydro-chlorofluorocarbons, installed before 19 May 2005 may continue in service:

System or equipment	Location on board	Substance

2.1.2 The following systems containing hydro-chlorofluorocarbons (HCFCs) installed before 1 January 2020 may continue in service:

System or equipment	Location on board	Substance

2.2 Nitrogen oxides (NOx) (regulation 13)

2.2.1 The following marine diesel engines installed on this ship comply with the applicable emission limit of regulation 13 in accordance with the revised NOx Technical Code 2008:

	Engine #1	Engine #2	Engine #3	Engine #4	Engine #5	Engine #6
Manufacturer and model						
Serial number						
Use						
Power output (kW)						
Rated speed (RPM)						
Date of installation (dd/mm/yy)						
Date of major conversion	According to Reg. 13.2.2					
	According to 13.2.3					
Exempted by regulation 13.1.1.2						
Tier 1 Reg. 13.3						
Tier II Reg. 13.4						
Tier II Reg. 13.5.1.1						
Approved Method exists						
Approved Method not commercial available						
Approved Method installed						

2.3 Sulphur oxides (SOx) and particulate matter (regulation 14)

2.3.1 When the ship operates within an Emission Control Area specified in regulation 14.3, the ship uses:

- .1 fuel oil with a sulphur content that does not exceed the applicable limit value as documented by bunker delivery notes; or.....
- .2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6

2.4 Volatile organic compounds (VOCs) (regulation 15)

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585.

2.4.2.1 For a tanker carrying crude oil, there is an approved VOC Management Plan

2.4.2.2 VOC Management Plan approval reference:

2.5 Shipboard incineration (regulation 16)

The ship has an incinerator:

.1 installed on or after 1 January 2000 which complies with Resolution MEPC.76(40) as amended

.2 installed before 1 January 2000 which complies with:

- .2.1 Resolution MEPC.59(33)
- .2.2 Resolution MEPC.76(40)

2.6 Equivalent (regulation 4)

The ship has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by MARPOL Annex VI:

System or equipment	Equivalent Used	Approval reference

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued

at

.....

(Place of issue of the Record)

(dd/mm/yyyy):

.....

.....
(Date of issue)
official

.....
(Signature of duly authorised)
issuing the Record)

(Seal or stamp of the authority, as appropriate)

SCHEDULE II

TEST CYCLES AND WEIGHTING FACTORS (Regulation 13)

The following test cycles and weighing factors shall be applied for verification of compliance of marine diesel engines with the applicable NOx limit in accordance with regulation 13 using the test procedure and calculation method as specified in the revised NOx Technical Code 2008.

- .1 For constant-speed marine engines for ship main propulsion, including diesel-electric drive, test cycle E2 shall be applied;
- .2 For controllable-pitch propeller sets test cycle E2 shall be applied;
- .3 For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied;
- .4 For constant-speed auxiliary engines test cycle D2 shall be applied; and
- .5 For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

Test cycle for *constant speed main propulsion* application
(including diesel-electric drive and all controllable-pitch propeller installations)

Test cycle type E2	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *propeller-law-operated main and propeller-law-operated auxiliary engine*
Application

Test cycle type E3	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *constant-speed auxiliary engine* application

Test cycle type D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

Test cycle for *variable-speed and load auxiliary engine* application

Test cycle type	Speed	Rated				Intermediate			Idle
	Torque	100%	75%	50%	10%	100%	75%	50%	0%
C1	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

In the case of an engine to be certified in accordance with subregulation (5)(a)(i) of regulation 13, the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

- .1 The 10% mode point in the D2 test cycle.
- .2 The 10% mode point in the C1 test cycle.
- .3 The idle mode point in the C1 test cycle.

SCHEDULE III

CRITERIA AND PROCEDURES FOR DESIGNATION OF EMISSION CONTROL AREAS (Regulation 13.6 and regulation 14.3)

1 OBJECTIVES

1.1 The purpose of this schedule is to provide the criteria and procedures to Parties for the formulation and submission of proposals for the designation of Emission Control Areas and to set forth the factors to be considered in the assessment of such proposals by the International Maritime Organization.

1.2 Emissions of NO_x, SO_x and particulate matter from ocean-going ships contribute to ambient concentrations of air pollution in cities and coastal areas around the world. Adverse public health and environmental effects associated with air pollution include premature mortality, cardiopulmonary disease, lung cancer, chronic respiratory ailments, acidification and eutrophication.

1.3 An Emission Control Area should be considered for adoption by the International Maritime Organization if supported by a demonstrated need to prevent, reduce, and control emissions of NO_x or SO_x and particulate matter or all three types of emissions (hereinafter emissions) from ships.

2 PROCESS FOR THE DESIGNATION OF EMISSION CONTROL AREAS

2.1 A proposal to the International Maritime Organization for designation of an Emission Control Area for NO_x or SO_x and particulate matter or all three types of emissions may be submitted only by Parties. Where two or more Parties have a common interest in a particular area, they should formulate a coordinated proposal.

2.2 A proposal to designate a given area as an Emission Control Area should be submitted to the International Maritime Organization in accordance with the rules and procedures established by the International Maritime Organization.

3 CRITERIA FOR DESIGNATION OF AN EMISSION CONTROL AREA

3.1 The proposal shall include:

.1 a clear delineation of the proposed area of application, along with a reference chart on which the area is marked;

.2 the type or types of emission(s) that is or are being proposed for control (i.e. NO_x or SO_x and particulate matter or all three types of emissions);

.3 a description of the human populations and environmental areas at risk from the impacts of ship emissions;

.4 an assessment that emissions from ships operating in the proposed area of application are contributing to ambient concentrations of air pollution or to

adverse environmental impacts. Such assessment shall include a description of the impacts of the relevant emissions on human health and the environment, such as adverse impacts to terrestrial and aquatic ecosystems, areas of natural productivity, critical habitats, water quality, human health, and areas of cultural and scientific significance, if applicable. The sources of relevant data including methodologies used shall be identified;

.5 relevant information pertaining to the meteorological conditions in the proposed area of application to the human populations and environmental areas at risk, in particular prevailing wind patterns, or to topographical, geological, oceanographic, morphological, or other conditions that contribute to ambient concentrations of air pollution or adverse environmental impacts;

.6 the nature of the ship traffic in the proposed Emission Control Area, including the patterns and density of such traffic;

.7 a description of the control measures taken by the proposing Party or Parties addressing land-based sources of NO_x, SO_x and particulate matter emissions affecting the human populations and environmental areas at risk that are in place and operating concurrent with the consideration of measures to be adopted in relation to provisions of regulations 13 and 14; and

.8 the relative costs of reducing emissions from ships when compared with land-based controls, and the economic impacts on shipping engaged in international trade.

3.2 The geographical limits of an Emission Control Area will be based on the relevant criteria outlined above, including emissions and deposition from ships navigating in the proposed area, traffic patterns and density, and wind conditions.

4 PROCEDURES FOR THE ASSESSMENT AND ADOPTION OF EMISSION CONTROL AREAS BY THE INTERNATIONAL MARITIME ORGANIZATION

4.1 The International Maritime Organization shall consider each proposal submitted to it by a Party or Parties.

4.2 In assessing the proposal, the International Maritime Organization shall take into account the criteria which are to be included in each proposal for adoption as set forth in section 3 above.

4.3 An Emission Control Area shall be designated by means of an amendment to MARPOL Annex VI, considered, adopted and brought into force in accordance with article 16 of the present Convention.

5 OPERATION OF EMISSION CONTROL AREAS

5.1 Parties which have ships navigating in the area are encouraged to bring to the International Maritime Organization any concerns regarding the operation of the area.

SCHEDULE IV

TYPE APPROVAL AND OPERATING LIMITS FOR SHIPBOARD INCINERATORS (Regulation 16)

1 Ships incinerators described in regulation 16.6.1 on board shall possess an IMO type approval certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in regulation 16.6.1. Each model shall be subject to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the competent authority, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph 2 of this schedule:

Sludge Oil Consisting of:	75% Sludge oil from HFO; 5% waste lubricating oil; and 20% emulsified water.
Solid waste consisting of:	50% food waste; 50% rubbish containing; approx. 30% paper, " 40% cardboard, " 10% rags, " 20% plastic The mixture will have up to 50% moisture and 7% incombustible solids.

2 Incinerators described in regulation 16(6)(a) shall operate within the following limits:

O ₂ in combustion chamber:	6 – 12%
CO in flue gas maximum average:	200 mg/MJ
Soot number maximum average:	Bacharach 3 or Ringelman 1 (20% opacity) (A higher soot number is acceptable only during very short periods such as starting up)
Unburned components in ash residues:	Maximum 10% by Weight
Combustion chamber flue gas outlet temperature range:	850 – 1200°C

SCHEDULE V

INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE (Regulation 18.5)

Name and IMO Number of receiving ship

Port

Date of commencement of delivery

Name, address, and telephone number of marine fuel oil supplier

Product name(s)

Quantity in metric tons

Density at 15oC, kg/m³*

Sulphur content (%m/m)**

A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with the applicable subparagraph of regulation 14.1 or 14.4 and regulation 18.3 of MARPOL Annex VI.

* Fuel oil shall be tested in accordance with ISO 3675:1998 or ISO 12185:1996.

** Fuel oil shall be tested in accordance with ISO 8754:2003.

SCHEDULE VI

FUEL VERIFICATION PROCEDURE FOR MARPOL ANNEX VI FUEL OIL SAMPLES (Regulation 18.8.2)

The following procedure shall be used to determine whether the fuel oil delivered to and used on board ships is compliant with the sulphur limits required by regulation 14 of Annex VI.

1. General Requirements

1.1 The representative fuel oil sample, which is required by paragraph 8.1 of regulation 18 (the “MARPOL sample”) shall be used to verify the sulphur content of the fuel oil supplied to a ship.

1.2 The competent authority shall manage the verification procedure.

1.3 The laboratories responsible for the verification procedure set forth in this schedule shall be fully accredited* for the purpose of conducting the tests.

2. Verification Procedure Stage 1

2.1 The MARPOL sample shall be delivered by the competent authority to the laboratory.

2.2 The laboratory shall:

- .1 record the details of the seal number and the sample label on the test record;
- .2 confirm that the condition of the seal on the MARPOL sample has not been broken; and
- .3 reject any MARPOL sample where the seal has been broken.

2.3 If the seal of the MARPOL sample has not been broken, the laboratory shall proceed with the verification procedure and shall:

- .1 ensure that the MARPOL sample is thoroughly homogenised;
- .2 draw two sub-samples from the MARPOL sample; and
- .3 reseal the MARPOL sample and record the new reseal details on the test record.

* Accreditation is in accordance with ISO 17025 or an equivalent standard.

2.4 The two sub-samples shall be tested in succession, in accordance with the specified test method referred to in Schedule V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as “A” and “B”:

.1 If the results of “A” and “B” are within the repeatability (r) of the test method, the results shall be considered valid.

.2 If the results of “A” and “B” are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples should be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 2.3.3 above after the new sub-samples have been taken.

2.5 If the test results of “A” and “B” are valid, an average of these two results should be calculated thus giving the result referred to as “X”:

.1 If the result of “X” is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of “X” is greater than the applicable limit required by Annex VI, Verification Procedure Stage 2 should be conducted; however, if the result of “X” is greater than the specification limit by 0.59R (where R is the reproducibility of the test method), the fuel oil shall be considered non-compliant and no further testing is necessary.

3. Verification Procedure Stage 2

3.1 If Stage 2 of the verification procedure is necessary in accordance with paragraph 2.5.2 above, the competent authority shall send the MARPOL sample to a second accredited laboratory.

3.2 Upon receiving the MARPOL sample, the laboratory shall:

.1 record the details of the reseal number applied in accordance with 2.3.3 and the sample label on the test record;

.2 draw two sub-samples from the MARPOL sample; and

.3 reseal the MARPOL sample and record the new reseal details on the test record.

3.3 The two sub-samples shall be tested in succession, in accordance with the test method specified in Schedule V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as “C” and “D”:

.1 If the results of “C” and “D” are within the repeatability (r) of the test method, the results shall be considered valid.

.2 If the results of “C” and “D” are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples shall be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 3.2.3 after the new sub-samples have been taken.

3.4 If the test results of “C” and “D” are valid, and the results of “A”, “B”, “C”, and “D” are within the reproducibility (R) of the test method then the laboratory shall average the results, which is referred to as “Y”:

.1 If the result of “Y” is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of “Y” is greater than the applicable limit required by Annex VI, then the fuel oil fails to meet the standards required by Annex VI.

3.5 If the result of “A”, “B”, “C” and “D” are not within the reproducibility (R) of the test method then the competent authority may discard all of the test results and, at its discretion, repeat the entire testing process.

3.6 The results obtained from the verification procedure are final.
