

REPUBLIC OF SOUTH AFRICA

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS  
AMENDMENT BILL

(As introduced)

(Minister of Transport)

[B 51-96]

REPUBLIEK VAN SUID-AFRIKA

WYSIGINGSWETSONTWERP OP DIE INTERNASIONALE KONVENSIE TER VOORKOMING  
VAN BESOEDELING DEUR SKEPE

(Soos ingedien)

(Minister van Vervoer)

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**GENERAL EXPLANATORY NOTE:** [ ] Words in bold type in square brackets indicate omissions from existing enactments. Words underlined with a solid line indicate insertions in existing enactments.

**BILL**

**To amend the International Convention for the Prevention of Pollution from Ships Act, 1986, so as to insert certain definitions and to amend other definitions; to provide anew for the application and interpretation of the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978; to make other provision for the making of regulations by the Minister of Transport; to create certain offences and to prescribe penalties for such offences; to give jurisdiction to a magistrate to impose any penalty prescribed by the Act; to extend the application of the Act to the Prince Edward Islands; and to give effect, pursuant to accession by the Republic, to Annex III to the said Protocol and to amendments to the said Protocol which have been accepted by the Republic; and to provide for matters connected therewith.**

**BE IT ENACTED** by the Parliament of the Republic of South Africa, as follows:-

**Amendment of section 1 of Act 2 of 1986**

1. Section 1 of the International Convention for the Prevention of Pollution from Ships Act, 1986 (hereinafter referred to as the principal Act), is hereby amended-

(a) by the substitution for the definition of "Convention" of the following definition:

" 'Convention' means the International Convention for the Prevention of Pollution from Ships, 1973, **[and the 1978 Protocol]** as amended by the Protocol of 1978 adopted by the Inter-Governmental Maritime Consultative Organization ("IMCO") in London on **[3 November 1973]** 17 February 1978, and set out in the Schedule;"

(b) by the insertion after the definition of "Convention" of the following definitions:

" 'Director-General' means the Director-General: Transport or any person acting on his or her authority;

'exclusive economic zone' means the exclusive economic zone referred to in section 7 of the Maritime Zones Act, 1994 (Act No. 15 of 1994);

'master', in relation to a ship, includes any person (other than a pilot) having command or charge of such ship;"

(c) by the substitution for the definition of "Minister" of the following definition:

" 'Minister' means the Minister of Transport **[Affairs];**"

(d) by the insertion after the definition of "Minister" of the following definition:

" 'owner', in relation to a ship, means the person or persons registered as owner of the ship, or, in the absence of registration, the person or persons to whom the ship belongs, but, in relation to a ship belonging to a State and which is operated by a person registered as the operator of the ship, the person so registered;" and

(e) by the insertion after the definition of "regulation" of the following definitions:

" 'ship' means a vessel of any type whatsoever operating in the sea and includes a hydrofoil boat, air-cushion vehicle, submersible, floating craft and fixed or floating platform;

'South African ship' means any ship having South African nationality as contemplated in section 64 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951);

'territorial waters' means the territorial waters referred to in section 4 of the Maritime Zones Act, 1994 (Act No. 15 of 1994);".

## **Substitution of section 2 of Act 2 of 1986**

2. The following section is hereby substituted for section 2 of the principal Act:

### **"Application and interpretation of Convention**

2. (1) Subject to the provisions of this Act, the Convention shall have effect in relation to-

(a) any South African ship, wherever it may be; and

(b) any other ship while it is in the Republic or its territorial waters or exclusive economic zone.

(2) Unless the context indicates otherwise, a reference in the Convention-

(a) to a State Party shall be construed as, or as including, a reference to the Republic, and any reference to a Party shall be construed accordingly;

(b) to the Administration or Government shall, in relation to a South African ship or the Republic, be construed as, or as including, a reference to the Minister or any person acting on his or her authority.

(3) The English text of the Convention shall prevail for the purposes of its interpretation."

### **Substitution of section 3 of Act 2 of 1986**

3. The following section is hereby substituted for section 3 of the principal Act:

#### **"Regulations**

3. (1) The Minister may make regulations-

(a) relating to the carrying out of, and giving effect to, the provisions of the Convention;

(b) whereby exemption is granted, with or without conditions, in respect of particular ships or ships of a particular class or type, from all or any of the provisions of the Convention;

(c) applying, subject to such exemptions, restrictions and modifications as may be desirable, any provision of the Convention to ships to which and in circumstances in which the Convention does not apply;

(d) prescribing fees, and providing for the recovery of expenditure incurred, in connection with the application of the Convention; and

(e) in general, for the better achievement of the purposes of this Act.

(2) Regulations made under subsection (1) may-

- (a) in so far as they relate to the matters mentioned in paragraph (a) of that subsection, include other and more extensive provisions than those contained in the Convention, provided they relate to the same or similar matters than those dealt with in the Convention;
- (b) prescribe, for any contravention thereof or failure to comply therewith, penalties not exceeding the maximum penalties prescribed by section 3A(4);
- (c) be applicable outside the Republic."

#### **Insertion of section 3A in Act 2 of 1986**

4. The following section is hereby inserted in the principal Act after section 3:

#### **"Offences and penalties**

**3A. (1) (a)** Any person who contravenes any provision of this Act or the Convention or who fails to comply with any provision thereof with which it is his or her duty to comply, shall be guilty of an offence.

(b) The owner and the master of a ship that does not comply with the requirements of this Act and the Convention shall each be guilty of an offence.

(2) (a) At a prosecution under subsection (1) in relation to a discharge of a harmful substance from a ship into the sea it shall be sufficient for the State to show that such discharge occurred, but it shall be a good defence if it is shown that the discharge complied with the requirements of this Act or the Convention.

(b) For the purposes of paragraph (a), 'discharge' and 'harmful substance' shall have the meanings assigned thereto in Article 2 of the Convention.

(3) No person shall be guilty of an offence under subsection (1) if he or she can show that he or she took all reasonable steps to ensure that the provisions of this Act and the Convention were complied with.

(4) Any person convicted of an offence under subsection (1) shall be liable to a fine not exceeding R500,000, or to imprisonment for a period not exceeding five years or to such fine as well as such imprisonment.

(5) If any person-

(a) admits to the Director-General that he or she has contravened or failed to comply with any provision of this Act or the Convention, which contravention or failure constitutes an offence under this Act;

(b) agrees to abide by the decision of the Director-General; and

(c) deposits with the Director-General such sum as that officer may require of him or her, but not exceeding the maximum fine which may be imposed for a conviction for the contravention or failure in question,

the Director-General may, after such enquiry as he or she deems necessary, determine the matter summarily and may, without legal proceedings, order the whole or any part of the said deposit to be forfeited to the State by way of a penalty.

(6) There shall be a right of appeal to the Minister from a determination or order by the Director-General whereby a penalty exceeding R10,000 is imposed under subsection (5), provided such right is exercised within a period of three months from the date of such determination or order.

(7) The imposition of a penalty under subsection (5) shall be deemed not to be a conviction of an offence, but no prosecution in respect of the offence in question may thereafter be instituted."

### **Substitution of section 4 of Act 2 of 1986**

5. The following section is hereby substituted for section 4 of the principal Act:

#### **"Jurisdiction**

4. (1) Any offence contemplated in section [3(2)] 3A(1) shall, for purposes in relation to jurisdiction of a court to try the offence be deemed to have been committed **[at any place where the accused happens to be]** within the area of jurisdiction of the court in which the prosecution is instituted.

(2) Notwithstanding anything to the contrary contained in any law, a magistrate's court shall have jurisdiction to impose any penalty prescribed by this Act."

### **Insertion of section 4A in Act 2 of 1986**

6. The following section is hereby inserted in the principal Act after section 4:

#### **"Application of Act to Prince Edward Islands**

4A. This Act shall also apply to the Prince Edward Islands referred to in section 1 of the Prince Edward Islands Act, 1948 (Act No. 43 of 1948), and a reference in this Act to the Republic shall include a reference to those Islands."

### **Substitution of section 5 of Act 2 of 1986**

7. The following section is hereby substituted for section 5 of the principal Act:

#### **"Short title**

5. This Act shall be called the **[International Convention for the Prevention of Pollution from Ships] Marine Pollution (Prevention of Pollution from Ships) Act, 1986 [and shall come into operation on a date fixed by the State President by proclamation in the Gazette]."**

#### **Amendment of Schedule to Act 2 of 1986**

8. The Schedule to the principal Act is hereby amended to the extent indicated in the Schedule.

#### **Substitution of long title of Act 2 of 1986**

9. The following long title is hereby substituted for the long title of the principal Act:

**"ACT**

**To provide for the [application in the Republic of] protection of the sea from pollution by oil and other harmful substances discharged from ships, and for that purpose to give effect to the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978; and to provide for matters connected therewith."**

#### **Short title and commencement of section 8**

10. This Act shall be called the International Convention for the Prevention of Pollution from Ships Amendment Act, 1996, and section 8 shall come into operation on a date fixed by the President by proclamation in the Gazette.

#### **Schedule (Section 8)**

**AMENDMENT OF THE SCHEDULE TO THE MARINE POLLUTION (PREVENTION OF POLLUTION FROM SHIPS) ACT, 1986: INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS AMENDED BY THE PROTOCOL OF 1978, TO GIVE EFFECT TO AMENDMENTS TO THE SAID PROTOCOL ADOPTED BY THE INTERNATIONAL MARITIME ORGANISATION BY RESOLUTIONS MEPC. 21(22), WHICH ENTERED INTO FORCE ON 6 APRIL 1987, 29(25), WHICH ENTERED INTO FORCE ON 1 APRIL 1989, 34(27), WHICH ENTERED INTO FORCE ON 13 OCTOBER 1990, 36(28), WHICH ENTERED INTO FORCE ON 18 FEBRUARY 1991, 42(30), WHICH ENTERED INTO FORCE ON 17 MARCH 1992, 47(31) AND 48(31), WHICH ENTERED INTO FORCE ON 4 APRIL 1993, 51(32) AND 52(32), WHICH ENTERED INTO FORCE ON 6 JULY 1993, 57(33), WHICH ENTERED INTO FORCE ON 1 JULY 1994, 58(33), WHICH ENTERED INTO FORCE ON 28 FEBRUARY 1994, AND RESOLUTIONS 1, 2 AND 3 OF THE CONFERENCE OF PARTIES TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS AMENDED BY THE PROTOCOL OF 1978 RELATING THERETO, ADOPTED ON 2 NOVEMBER 1994, WHICH ENTERED INTO FORCE ON 3 MARCH 1996**

#### **Definition**

1. In this Schedule "the Convention" means the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978, as contained in the Schedule to the Marine Pollution (Prevention of Pollution from Ships) Act, 1986 (Act No. 2 of 1986).

### **Substitution of Protocol I to Convention**

2. The following Protocol is hereby substituted for Protocol I to the Convention:

#### **"PROTOCOL I**

#### **PROVISIONS CONCERNING REPORTS ON INCIDENTS INVOLVING HARMFUL SUBSTANCES(in accordance with Article 8 of the Convention)**

#### **ARTICLE I**

##### **Duty to Report**

**(1) The Master or other person having charge of any ship involved in an incident referred to in Article II of this Protocol shall report the particulars of such incident without delay and to the fullest extent possible in accordance with the provisions of this Protocol.**

(2) In the event of the ship referred to in paragraph (1) of this Article being abandoned, or in the event of a report on such a ship being incomplete or unobtainable, the owner, charterer, manager or operator of the ship, or their agent shall, to the fullest extent possible, assume the obligations placed upon the Master under the provisions of this Protocol.

#### **ARTICLE II**

##### **When to Report**

**(1) A report shall be made when an incident involves:**

**(a) a discharge or probable discharge of oil, or noxious liquid substances carried in bulk, resulting from damage to the ship or its equipment, or for the purpose of securing the safety of a ship or saving life at sea;**

(b) a discharge or probable discharge of harmful substances in packaged form, including those in freight containers, portable tanks, road and rail vehicles and shipborne barges; or

(c) a discharge during the operation of the ship of oil or noxious liquid substances in excess of the quantity or instantaneous rate permitted under the present Convention.

(2) For the purposes of this Protocol-

(a) 'oil' referred to in paragraph (1)(a) of this Article means oil as defined in Regulation 1(1) of Annex I to the Convention;

(b) 'noxious liquid substances' referred to in paragraph (1)(a) of this Article means noxious liquid substances as defined in Regulation 1(6) of Annex II to the Convention;

(c) 'harmful substances' in packaged form referred to in paragraph (1)(b) of this Article means substances which are identified as marine pollutants in the International Maritime Dangerous Goods (IMDG) Code.

### ARTICLE III

#### Contents of Report

##### Reports shall in any case include:

(a) identity of ships involved;

(b) time, type and location of incident;

(c) quantity and type of harmful substance involved;

(d) assistance and salvage measures.

### ARTICLE IV

#### Supplementary Report

Any person who is obliged under the provisions of this Protocol to send a report shall, when possible-

(a) supplement the initial report, as necessary, and provide information concerning further developments; and

(b) comply as fully as possible with requests from affected States for additional information.

### ARTICLE V

#### Reporting Procedures

(1) Reports shall be made by the fastest telecommunications channels available with the highest possible priority to the nearest coastal State.

(2) In order to implement the provisions of this Protocol, Parties to the present Convention shall issue, or cause to be issued, regulations or instructions on the procedures to be followed in reporting incidents involving harmful substances, based on guidelines developed by the Organization.".



## **Amendment of Regulation 1 of Chapter I of Annex I to Convention**

3. Regulation 1 of Chapter I of Annex I to the Convention is hereby amended by the addition to paragraph (8) of the following subparagraph:

"(c) Notwithstanding the provisions of subparagraph (a) of this paragraph, the conversion of an existing oil tanker to meet the requirements of Regulation 13F or 13G of this Annex shall not be deemed to constitute a major conversion for the purpose of this Annex."

## **Insertion of Regulation 8A in Chapter I of Annex I to Convention**

4. The following Regulation is hereby inserted in Chapter I of Annex I to the Convention after Regulation 8:

### **"Regulation 8A**

#### **Port State Control on Operational Requirements**

(1) A ship when in a port or an offshore terminal 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 pollution by oil.

(2) In the circumstances given in paragraph (1), the Party shall take such steps as will 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.

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

## **Amendment of Regulation 9 of Chapter II of Annex I to Convention**

5. Regulation 9 of Chapter II of Annex I to the Convention is hereby amended-

(a) by the substitution for item (iv) of subparagraph (a) of paragraph (1) of the following item:

"(iv) the instantaneous rate of discharge of oil content does not exceed **[60]** 30 litres per nautical mile;"

(b) by the substitution for subparagraph (b) of paragraph (1) of the following subparagraph:

"(b) from a ship of 400 tons gross tonnage and above other than an oil tanker and from machinery space bilges excluding cargo pump-room bilges of an oil tanker unless mixed with oil cargo residue:

(i) the ship is not within a special area;

(ii) the ship is proceeding en route;

(iii) the oil content of the effluent without dilution does not exceed 15 parts per million; and

(iv) the ship has in operation equipment as required by Regulation 16 of this Annex.";

(c) by the substitution for paragraph (4) of the following paragraph:

"(4) The provisions of paragraph (1) of this Regulation shall not apply to the discharge of clean or segregated ballast or unprocessed oily mixtures which without dilution have an oil content not exceeding 15 parts per million and which do not originate from cargo pump-room bilges and are not mixed with oil cargo residues. **[The provisions of subparagraph (1)(b) of this Regulation shall not apply to the discharge of the processed oily mixture, provided that all of the following conditions are satisfied:**

**(a) the oily mixture does not originate from cargo pump-room bilges;**

**(b) the oily mixture is not mixed with oil cargo residues;**

**(c) the oil content of the effluent without dilution does not exceed 15 parts per million; and**

**(d) the ship has in operation oil filtering equipment complying with Regulation 16(7) of this Annex.]"; and**

(d) by the addition of the following paragraph:

"(7) In the case of a ship, referred to in Regulation 16(6) of this Annex, not fitted with equipment required by Regulation 16(1) or (2) of this Annex, the provisions of paragraph (1)(b) of this Regulation will not apply until 6 July 1998 or the date on which the ship is fitted with such equipment, whichever is the earlier. Until this date any discharge from machinery space bilges into the sea of oil or oily mixtures from such ship shall be prohibited except when all the following conditions are satisfied:

(a) the oily mixture does not originate from the cargo pump-room bilges;

(b) the oily mixture is not mixed with oil cargo residues;

- (c) the ship is not within a special area;
- (d) the ship is more than 12 nautical miles from the nearest land;
- (e) the ship is proceeding en route;
- (f) the oil content of the effluent is less than 100 parts per million; and
- (g) the ship has in operation oily-water separating equipment of a design approved by the Administration, taking into account the specification recommended by the Organization\*."

### **Amendment of Regulation 10 of Chapter II of Annex I to Convention**

6. Regulation 10 of Chapter II of Annex I to the Convention is hereby amended-

(a) by the substitution for paragraph (1) of the following paragraph:

"(1) For the purposes of this Annex the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, **[and]** the Gulfs area, the Gulf of Aden area and the Antarctic area, which are defined as follows:

(a) The Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41°N parallel and bounded to the west by the Straits of Gibraltar at the meridian of 5°36'W.

(b) The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.

(c) The Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41°N.

(d) The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12°8.5'N, 43°19.6'E) and Husn Murad (12°40.4'N, 43°30.2'E).

(e) The Gulfs area means the sea area located north west of the rhumb line between Ras al Hadd (22°30'N, 59°48'E) and Ras **[el]** Al Fasteh (25°04'N, 61°25'E).

(f) The Gulf of Aden area means that part of the Gulf of Aden between the Red Sea and the Arabian Sea bounded to the west by the rhumb line between Ras si Ane (12°8.5'N, 43°19.6'E) and Husn Murad (12°40.4'N, 43°30.2'E) and to the east

by the rhumb line between Ras Asir (11°50'N, 51°16.9'E) and Ras Fartak (15°35'N, 52°13.8'E).

(g) The Antarctic area means the sea area south of 60° south latitude.";

(b) by the substitution for subparagraphs (a) and (b) of paragraph (2) of the following subparagraphs, respectively:

"(a) any discharge into the sea of oil or oily mixture from any oil tanker, **[and] or** any ship of 400 tons gross tonnage and above other than an oil tanker, shall be prohibited, while in a special area. In respect of the Antarctic area, any discharge into the sea of oil or oily mixture from any ship shall be prohibited;

(b) any discharge into the sea of oil or oily mixture from a ship of less than 400 tons gross tonnage, other than an oil tanker, shall be prohibited while in a special area, except when the oil content of the effluent without dilution does not exceed 15 parts per million. **[or alternatively when all of the following conditions are satisfied:**

**(i) the ship is proceeding en route;**

**(ii) the oil content of the effluent is less than 100 parts per million; and**

**(iii) the discharge is made as far as practicable from the land, but in no case less than 12 nautical miles from the nearest land]**";

(c) by the substitution for item (v) of subparagraph (b) of paragraph (3) of the following item:

"(v) the ship has in operation oil filtering equipment complying with Regulation 16[(7)] (5) of this Annex; and";

(d) by the substitution in subparagraph (b) of paragraph (7) for the words preceding item (i) of the following words:

"Red Sea area, **[and] Gulfs area and the Gulf of Aden area**"; and

(e) by the addition of the following paragraph:

"(8) Notwithstanding paragraph (7), the following rules shall apply to the Antarctic area:

(a) The Government of each Party to the Convention whose ports are used by ships departing en route or arriving from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all sludge, dirty ballast, tank washing water, and other oily residues and mixtures from all ships without causing undue delay, and according to the needs of the ships using them.

(b) The Government of each Party to the Convention shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, are fitted with a tank or tanks of sufficient capacity on board for the retention of all sludge, dirty ballast, tank washing water and other oily residues and mixtures while operating in the area and have concluded agreements to discharge such oily residues at a reception facility after leaving the area.".

### **Insertion of Regulations 13F and 13G in Chapter II of Annex I to Convention**

7. The following Regulations are hereby inserted in Chapter II of Annex I to the Convention after Regulation 13E:

#### **"Regulation 13F**

##### **Prevention of Oil Pollution in event of Collision or Stranding**

(1) This Regulation shall apply to oil tankers of 600 tons deadweight and above-

(a) for which the building contract is placed on or after 6 July 1993;

(b) in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 6 January 1994;

(c) the delivery of which is on or after 6 July 1996; or

(d) which have undergone a major conversion-

(i) for which the contract is placed after 6 July 1993;

(ii) in the absence of a contract, the construction work of which is begun after 6 January 1994; or

(iii) which is completed after 6 July 1996.

(2) Every oil tanker of 5,000 tons deadweight and above shall:

(a) in lieu of Regulation 13E, as applicable, comply with the requirements of paragraph (3) unless it is subject to the provisions of paragraphs (4) and (5); and

(b) comply, if applicable, with the requirements of paragraph (6).

(3) The entire cargo tank length shall be protected by ballast tanks or spaces other than cargo or fuel oil tanks as follows:

(a) Wing tanks or spaces Wing tanks or spaces shall extend either for the full depth of the ship's side or from the top of the double bottom to the uppermost deck,

disregarding a rounded gunwale where fitted. They shall be arranged such that the cargo tanks are located inboard of the moulded line of the side shell plating, nowhere less than the distance  $w$  which, as shown in figure 1, is measured at any cross-section at right angles to the side shell, as specified below:  $w = 0.5 + DW/20,000$  (m); or  $w = 2.0$  m, whichever is the lesser. The minimum value of  $w = 1.0$  m.

(b) Double bottom tanks or spaces At any cross-section the depth of each double bottom tank or space shall be such that the distance  $h$  between the bottom of the cargo tanks and the moulded line of the bottom shell plating measured at right angles to the bottom shell plating as shown in figure 1 is not less than specified below:  $h = B/15$  (m); or  $h = 2.0$  m, whichever is the lesser. The minimum value of  $h = 1.0$  m.

(c) Turn of the bilge area or at locations without a clearly defined turn of the bilge When the distances  $h$  and  $w$  are different, the distance  $w$  shall have preference at levels exceeding  $1.5h$  above the baseline as shown in figure 1.

(d) The aggregate capacity of ballast tanks On crude oil tankers of 20,000 tons deadweight and above and product carriers of 30,000 tons deadweight and above, the aggregate capacity of wing tanks, double bottom tanks, forepeak tanks and afterpeak tanks shall not be less than the capacity of segregated ballast tanks necessary to meet the requirements of Regulation 13. Wing tanks or spaces and double bottom tanks used to meet the requirements of Regulation 13 shall be located as uniformly as practicable along the cargo tank length. Additional segregated ballast capacity provided for reducing longitudinal hull girder bending stress, trim, etc., may be located anywhere within the ship.

(e) Suction wells in cargo tanks Suction wells in cargo tanks may protrude into the double bottom below the boundary line defined by the distance  $h$  provided that such wells are as small as practicable and the distance between the well bottom and bottom shell plating is not less than  $0.5h$ .

(f) Ballast and cargo piping Ballast piping and other piping such as sounding and vent piping to ballast tanks shall not pass through cargo tanks. Cargo piping and similar piping to cargo tanks shall not pass through ballast tanks. Exemptions to this requirement may be granted for short lengths of piping, provided that they are completely welded or equivalent thereto.

**Figure 1-Cargo tank boundary lines for the purpose of paragraph (3)**

(4) (a) Double bottom tanks or spaces as required by paragraph (3)(b) may be dispensed with, provided that the design of the tanker is such that the cargo and vapour pressure exerted on the bottom shell plating forming a single boundary between the cargo and the sea does not exceed the external hydrostatic water pressure, as expressed by the following formula:  $f_{hc} p_c g + 100 l a O p \setminus H d n p s g$  where:

$h_c$  = height of cargo in contact with the bottom shell plating in metres

$p_c$  = maximum cargo density in  $t/m^3$

$d_n$  = minimum operating draught under any expected loading condition in metres

$p_s$  = density of sea water in  $t/m^3$

$O_p$  = maximum set pressure of pressure/vacuum valve provided for the cargo tank in bars

$f$  = safety factor = 1.1

$g$  = standard acceleration of gravity ( $9.81 \text{ m/s}^2$ ).

(b) Any horizontal partition necessary to fulfil the above requirements shall be located at a height of not less than  $B/6$  or 6 metres, whichever is the lesser, but not more than  $0.6D$ , above the baseline where  $D$  is the moulded depth amidships.

(c) The location of wing tanks or spaces shall be as defined in paragraph (3)(a) except that, below a level  $1.5h$  above the baseline where  $h$  is as defined in paragraph (3)(b), the cargo tank boundary line may be vertical down to the bottom plating, as shown in figure 2.

**Figure 2**-Cargo tank boundary lines for the purpose of paragraph (4)

(5) Other methods of design and construction of oil tankers may also be accepted as alternatives to the requirements prescribed in paragraph (3), provided that such methods ensure at least the same level of protection against oil pollution in the event of collision or stranding and are approved in principle by the Marine Environment Protection Committee based on guidelines developed by the Organization.

(6) For oil tankers of 20,000 tons deadweight and above the damage assumptions prescribed in Regulation 25(2)(b) shall be supplemented by the following assumed bottom raking damage:

(a) longitudinal extent:

(i) ships of 75,000 tons deadweight and above:  $0.6L$  measured from the forward perpendicular;

(ii) ships of less than 75,000 tons deadweight:  $0.4L$  measured from the forward perpendicular;

(b) transverse extent:  $B/3$  anywhere in the bottom;

(c) vertical extent: breach of the outer hull.

(7) Oil tankers of less than 5,000 tons deadweight shall:

(a) at least be fitted with double bottom tanks or spaces having such a depth that the distance  $h$  specified in paragraph (3)(b) complies with the following:  $h = B/15$  (m) with a minimum value of  $h = 0.76$  m; in the turn of the bilge area and at locations without a clearly defined turn of the bilge, the cargo tank boundary line shall run parallel to the line of the mid-ship flat bottom as shown in figure 3; and

(b) be provided with cargo tanks so arranged that the capacity of each cargo tank does not exceed 700 m<sup>3</sup> unless wing tanks or spaces are arranged in accordance with paragraph (3)(a) complying with the following:  $w = 0.4 + 2.4 DW/20,000$  (m) with a minimum value of  $w = 0.76$  m.

**Figure 3**-Cargo tank boundary lines for the purpose of paragraph (7)

(8) Oil shall not be carried in any space extending forward of a collision bulkhead located in accordance with Regulation II-1/11 of the International Convention for the Safety of Life at Sea, 1974, as amended. An oil tanker that is not required to have a collision bulkhead in accordance with that Regulation shall not carry oil in any space extending forward of the transverse plane perpendicular to the centreline that is located as if it were a collision bulkhead located in accordance with that Regulation.

(9) In approving the design and construction of oil tankers to be built in accordance with the provisions of this Regulation, Administrations shall have due regard to the general safety aspects including the need for the maintenance and inspection of wing and double bottom tanks or spaces.

## **Regulation 13G**

### **Prevention of Oil Pollution in the event of Collision or Stranding: Measures for Existing Tankers**

(1) This Regulation shall:

(a) apply to crude oil tankers of 20,000 tons deadweight and above and to product carriers of 30,000 tons deadweight and above, which are contracted, the keels of which are laid, or which are delivered before the dates specified in Regulation 13F(1) of this Annex;

(b) not apply to oil tankers complying with Regulation 13F of this Annex, which are contracted, the keels of which are laid, or are delivered before the dates specified in Regulation 13F(1) of this Annex; and

(c) not apply to oil tankers covered by subparagraph (a) which comply with Regulation 13F(3)(a) and (b), (4) or (5) of this Annex, except that the requirement for minimum distances between cargo tank boundaries and the ship's side and bottom plating need



not be met in all respects. In that event, the side protection distances shall not be less than those specified in the International Bulk Chemical Code for type 2 cargo tank location and the bottom protection shall comply with Regulation 13E(4)(b) of this Annex.

(2) The requirements of this Regulation shall take effect as from 6 July 1995.

(3) (a) An oil tanker to which this Regulation applies shall be subject to an enhanced programme of inspections during periodical, intermediate and annual surveys, the scope and frequency of which shall at least comply with the guidelines developed by the Organization.

(b) An oil tanker over five years of age to which this Regulation applies shall have on board, available to the competent authority of any Government of a State Party to the present Convention, a complete file of the survey reports, including the results of all scantling measurement required, as well as the statement of structural work carried out.

(c) The file referred to in subparagraph (b) shall be accompanied by a condition evaluation report, containing conclusions on the structural condition of the ship and its residual scantlings, endorsed to indicate that it has been accepted by or on behalf of the flag Administration. This file and condition evaluation report shall be prepared in a standard format as contained in the guidelines developed by the Organization.

(4) An oil tanker not meeting the requirements of a new oil tanker as defined in Regulation 1(26) of this Annex shall comply with the requirements of Regulation 13F of this Annex not later than 25 years after its date of delivery, unless wing tanks or double bottom spaces, not used for the carriage of oil and meeting the width and height requirements of Regulation 13E(4), cover at least 30% of  $L_t$  for the full depth of the ship on each side or at least 30% of the projected bottom shell area IgSPAs within the length  $L_t$ , where  $L_t$  and the projected bottom shell area IgSPAs are as defined in Regulation 13E(2), in which case compliance with Regulation 13F is required not later than 30 years after its date of delivery.

(5) An oil tanker meeting the requirements of a new oil tanker as defined in Regulation 1(26) of this Annex shall comply with the requirements of Regulation 13F of this Annex not later than 30 years after its date of delivery.

(6) Any new ballast and load conditions resulting from the application of paragraph (4) of this Regulation shall be subject to approval of the Administration which shall have regard, in particular, to longitudinal and local strength, intact stability and, if applicable, damage stability.

(7) Other structural or operational arrangements such as hydrostatically balanced loading may be accepted as alternatives to the requirements prescribed in paragraph (4), provided that such alternatives ensure at least the same level of protection against

oil pollution in the event of collision or stranding and are approved by the Administration based on guidelines developed by the Organization.".

### **Amendment of Regulation 15 of Chapter II of Annex I to Convention**

8. Regulation 15 of Chapter II of Annex I to the Convention is hereby amended by the substitution for subparagraph (a) of paragraph (3) of the following subparagraph:

"(a) An oil discharge monitoring and control system approved by the Administration shall be fitted. In considering the design of the oil content meter to be incorporated in the system, the Administration shall have regard to the specification recommended by the Organization.\* The system shall be fitted with a recording device to provide a continuous record of the discharge in litres per nautical mile and total quantity discharged, or the oil content and rate of discharge. This record shall be identifiable as to time and date and shall be kept for at least three years. The oil discharge monitor and control system shall come into operation when there is any discharge of effluent into the sea and shall be such as will ensure that any discharge of oily mixture is automatically stopped when the instantaneous rate of discharge of oil exceeds that permitted by Regulation 9(1)(a) of this Annex. Any failure of this monitoring and control system shall stop the discharge and be noted in the Oil Record Book. A manually operated alternative method shall be provided and may be used in the event of such failure, but the defective unit shall be made operable **[before the oil tanker commences its next ballast voyage unless it is proceeding to a repair port]** as soon as possible. The port State authority may allow the tanker with a defective unit to undertake one ballast voyage before proceeding to a repair port. The oil discharge monitoring and control system shall be designed and installed in compliance with the Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers developed by the Organization.\* Administrations may accept such specific arrangements as detailed in the Guidelines and Specifications.".

### **Substitution of Regulation 16 of Chapter II of Annex I to Convention**

9. The following Regulation is hereby substituted for Regulation 16 of Chapter II of Annex I to the Convention:

#### **"Regulation 16**

#### **Oil Discharge Monitoring and Control System and Oil Filtering Equipment**

(1) Any ship of 400 tons gross tonnage and above but less than 10,000 tons gross tonnage shall be fitted with oil filtering equipment complying with paragraph (4) of this Regulation. Any such ship which carries large quantities of oil fuel shall comply with paragraph (2) of this Regulation or paragraph (1) of Regulation 14.

(2) Any ship of 10,000 tons gross tonnage and above shall be provided with oil filtering equipment, and with arrangements for an alarm and for automatically stopping

any discharge of oily mixture when the oil content in the effluent exceeds 15 parts per million.

(3) (a) The Administration may waive the requirements of paragraphs (1) and (2) of this Regulation for any ship engaged exclusively on voyages within special areas provided that all of the following conditions are complied with:

(i) the ship is fitted with a holding tank having a volume adequate, to the satisfaction of the Administration, for the total retention on board of the oily bilge water;

(ii) all oily bilge water is retained on board for subsequent discharge to reception facilities;

(iii) the Administration has determined that adequate reception facilities are available to receive such oily bilge water in a sufficient number of ports or terminals at which the ship calls;

(iv) the International Oil Pollution Prevention Certificate, when required, is endorsed to the effect that the ship is exclusively engaged on voyages within special areas; and

(v) the quantity, time, and port of the discharge are recorded in the Oil Record Book.

(b) The Administration shall ensure that ships of less than 400 tons gross tonnage are equipped, as far as practicable, to retain on board oil or oily mixtures or discharge them in accordance with the requirements of Regulation 9(1)(b) of this Annex.

(4) Oil filtering equipment referred to in paragraph (1) of this Regulation shall be of a design approved by the Administration and shall be such as will ensure that any oily mixture discharged into the sea after passing through the system has an oil content not exceeding 15 parts per million. In considering the design of such equipment, the Administration shall have regard to the specifications recommended by the Organization\*.

(5) Oil filtering equipment referred to in paragraph (2) of this Regulation shall be of a design approved by the Administration and shall be such as will ensure that any oil mixture discharged into the sea after passing through the system or systems has an oil content not exceeding 15 parts per million. It shall be provided with alarm arrangements to indicate when this level cannot be maintained. The system shall also be provided with arrangements such as will ensure that any discharge of oil mixtures is automatically stopped when the oil content of the effluent exceeds 15 parts per million. In considering the design of such equipment, the Administration shall have regard to the specification recommended by the Organization\*.

(6) For ships delivered before 6 July 1993 the requirements of this Regulation shall apply from 6 July 1998 provided that these ships can operate with oily-water separating equipment (100 ppm equipment)".

### **Amendment of Regulation 17 of Chapter II of Annex I to Convention**

10. Regulation 17 of Chapter II of Annex I to the Convention is hereby amended by the addition of the following paragraph:

"(3) Piping to and from sludge tanks shall have no direct connection overboard, other than the standard discharge connection referred to in Regulation 19."

### **Amendment of Regulation 21 of Chapter II of Annex I to Convention**

11. Regulation 21 of Chapter II of Annex I to the Convention is hereby amended-

(a) by the substitution for subparagraph (c) of the following subparagraph:

"(c) [**in any special area and**] subject to the provisions of Regulation 11 of this Annex, the discharge into the sea of oil or oily mixture shall be prohibited except when the oil content of the discharge without dilution does not exceed 15 parts per million."; and

(b) by the deletion of subparagraph (d).

### **Amendment of Regulation 24 of Chapter III of Annex I to Convention**

12. Regulation 24 of Chapter III of Annex I to the Convention is hereby amended by the substitution for paragraph (4) of the following paragraph:

"(4) The length of each cargo tank shall not exceed 10 metres or one of the following values, whichever is the greater:

(a) where no longitudinal bulkhead is provided inside the cargo tanks:  $(0.5 b_i/B + 0.1)L$  but not to exceed  $0.2L$

(b) where a centreline longitudinal bulkhead is provided inside the cargo tanks:  $(0.25 b_i/B + 0.15)L$

(c) where two or more longitudinal bulkheads are provided inside the cargo tanks:

(i) for wing cargo tanks:  $0.2L$

(ii) for centre cargo tanks:

(1) if  $b_i/B$  is equal to or greater than one fifth:  $0.2L$

(2) if  $b_i/B$  is less than one fifth: - where no centreline longitudinal bulkhead is provided:  $(0.5 b_i/B + 0.1)L$

- where a centreline longitudinal bulkhead is provided:  $(0.25 b_i/B + 0.15)L$

(d) bi is the minimum distance from the ship's side to the outer longitudinal bulkhead of the tank in question measured inboard at right angles to the centreline at the level corresponding to the assigned summer freeboard.".

## **Addition of Chapter IV to Annex I to Convention**

13. The Convention is hereby amended by the addition to Annex I to the Convention of the following Chapter:

### **"CHAPTER IV–PREVENTION OF POLLUTION ARISING FROM AN OIL POLLUTION INCIDENT**

#### **Regulation 26**

#### **Shipboard Oil Pollution Emergency Plans**

(1) Every oil tanker of 150 tons gross tonnage and above and every ship other than an oil tanker of 400 tons gross tonnage and above shall carry on board a shipboard oil pollution emergency plan approved by the Administration. In the case of ships built before 4 April 1993 this requirement shall apply 24 months after that date.

(2) Such a plan shall be in accordance with guidelines\* developed by the Organization and written in the working language of the master and officers. The plan shall consist at least of:

(a) The procedure to be followed by the master or other persons having charge of the ship to report an oil pollution incident, as required in Article 8 and Protocol I of the present Convention, based on the guidelines developed by the Organization\*\*;

(b) the list of authorities or persons to be contacted in the event of an oil pollution incident;

(c) a detailed description of the action to be taken immediately by persons on board to reduce or control the discharge of oil following the incident; and

(d) the procedures and point of contact on the ship for co-ordinating shipboard action with national and local authorities in combating the pollution.".

## **Substitution of Forms A and B of Appendix II to Annex I to Convention**

14. The following Forms are hereby substituted for Forms A and B of Appendix II to Annex I to the Convention:

### **"FORM A**

#### **(Revised 1991)**

# **SUPPLEMENT TO THE INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE (IOPP CERTIFICATE)**

## **RECORD OF CONSTRUCTION AND EQUIPMENT FOR SHIPS OTHER THAN OIL TANKERS**

in respect of the provisions of Annex I to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention').

### Notes:

1. This form is to be used for the third type of ships as categorized in the IOPP Certificate, i.e. 'ships other than any of the above'. For oil tankers and ships other than oil tankers with cargo tanks coming under Regulation 2(2) of Annex I to the Convention, Form B shall be used.
2. This Record shall be permanently attached to the IOPP Certificate. The IOPP Certificate shall be available on board the ship at all times.
3. If the language of the original Record is neither English nor French, the text shall include a translation into one of these languages.
4. Entries in boxes shall be made by inserting either a cross (X) for the answers 'yes' and 'applicable' or a dash (-) for the answers 'no' and 'not applicable' as appropriate.
5. Regulations mentioned in this Record refer to regulations of Annex I to the Convention and resolutions refer to those adopted by the International Maritime Organization.

### 1. PARTICULARS OF SHIP

1.1 Name of ship

1.2 Distinctive number or letters

1.3 Port of registry

1.4 Gross tonnage

1.5 Date of build:

1.5.1 Date of building contract

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

1.5.3 Date of delivery

1.6 Major conversion (if applicable):

1.6.1 Date of conversion contract

1.6.2 Date on which conversion was commenced

1.6.3 Date of completion of conversion

1.7 Status of ship:

1.7.1 New ship in accordance with Regulation 1(6))

1.7.2 Existing ship in accordance with Regulation 1(7))

1.7.3 The ship has been accepted by the Administration as an 'existing ship' under Regulation 1(7) due to unforeseen delay in delivery)

2. EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACE BILGES AND OIL FUEL TANKS (Regulations 10 and 16)

2.1 Carriage of ballast water in oil fuel tanks:

2.1.1 The ship may under normal conditions carry ballast water in oil fuel tanks)

2.2 Type of oil filtering equipment fitted:

2.2.1 Oil filtering (15 ppm) equipment (Regulation 16(4))

2.2.2 Oil filtering (15 ppm) equipment with alarm and automatic stopping device (Regulation 16(5))

2.3 The ship is allowed to operate with the existing equipment until 6 July 1998 (Regulation 16(6)) and fitted with:

2.3.1 Oily-water separating (100 ppm) equipment)

2.3.2 Oil filtering (15 ppm) equipment without alarm)

2.3.3 Oil filtering (15 ppm) equipment without alarm and manual stopping device)

2.4 Approval standards:

2.4.1 The separating/filtering equipment:

.1 has been approved in accordance with resolution A.393(X))

.2 has been approved in accordance with resolution A.233(VII))

.3 has been approved in accordance with national standards not based upon resolution A.393(X) or A.233(VII))

.4 has not been approved)

2.4.2 The process unit has been approved in accordance with resolution A.444(XI))

2.4.3 The oil content meter has been approved in accordance with resolution A.393(X))

2.5 Maximum throughput of the system is m<sup>3</sup>/h

2.6 Waiver of Regulation 16

2.6.1 The requirements of Regulation 16(1) or (2) are waived in respect of the ship in accordance with Regulation 16(3)(a). The ship is engaged exclusively on:

.1 Voyages within special area(s): )

.2 Voyages within 12 nautical miles of the nearest land outside special area(s) restricted to: )

2.6.2 The ship is fitted with holding tank(s) having a volume of ..... m<sup>3</sup> for the total retention on board of all oily bilge water )

3. MEANS FOR RETENTION AND DISPOSAL OF OIL RESIDUES (SLUDGE) (Regulation 17)

3.1 The ship is provided with oil residue (sludge) tanks as follows:

Tank identification

TankLocation

Volume (m<sup>3</sup>)

Frames (from)-(to)

Lateral Position

Total volume: m<sup>3</sup>

3.2 Means for the disposal of residues in addition to the provisions of sludge tanks:

3.2.1 incinerator for oil residues, capacityl/h )

3.2.2 auxiliary boiler suitable for burning oil residues)

3.2.3 tank for mixing oil residues with fuel oil, capacitym<sup>3</sup> )



3.2.4 other acceptable means: )

4. STANDARD DISCHARGE CONNECTION (Regulation 19)

4.1 The ship is provided with a pipeline for the discharge of residues from machinery bilges to reception facilities, fitted with a standard discharge connection in accordance with Regulation 19)

5. SHIPBOARD OIL POLLUTION EMERGENCY PLAN (Regulation 26)

5.1 The ship is provided with a shipboard oil pollution emergency plan in compliance with Regulation 26)

6. EXEMPTION

6.1 Exemptions have been granted by the Administration from the requirements of Chapter II of Annex I to the Convention in accordance with Regulation 2(4)(a) on those items listed under paragraph(s) of this Record )

7. EQUIVALENTS (Regulation 3)

7.1 Equivalents have been approved by the Administration for certain requirements of Annex I listed under paragraph(s) of this Record )

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

Issued at

(Place of issue of the Record)

..... 19... (Signature of duly authorized officer issuing the Record)

(Seal or stamp of the issuing authority, as appropriate)

**FORM B**

**(Revised 1991)**

**SUPPLEMENT TO INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE (IOPP CERTIFICATE)**

**RECORD OF CONSTRUCTION AND EQUIPMENT FOR OIL TANKERS**

in respect of the provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention').

## Notes:

1. This form is to be used for the third type of ships as categorized in the IOPP Certificate, i.e. 'ships other than any of the above'. For oil tankers and ships other than oil tankers with cargo tanks coming under Regulation 2(2) of Annex I to the Convention, Form A shall be used.
2. This Record shall be permanently attached to the IOPP Certificate. The IOPP Certificate shall be available on board the ship at all times.
3. If the language of the original Record is neither English nor French, the text shall include a translation into one of these languages.
4. Entries in boxes shall be made by inserting either a cross (X) for the answers 'yes' and 'applicable' or a dash (-) for the answers 'no' and 'not applicable' as appropriate.
5. Unless otherwise stated, Regulations mentioned in this Record refer to Regulations of Annex I to the Convention and Resolutions refer to those adopted by the International Maritime Organization.

## 1. PARTICULARS OF SHIP

1.1 Name of ship

1.2 Distinctive numbers or letters

1.3 Port of registry

1.4 Gross tonnage

1.5 Carrying capacity of ship(m<sup>3</sup>)

1.6 Deadweight of ship(metric tons) (Regulation 1(22))

1.7 Length of ship(m) (Regulation 1(18))

1.8 Date of build:

1.8.1 Date of building contract

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

1.8.3 Date of delivery

1.9 Major conversion (if applicable):

1.9.1 Date of conversion contract

1.9.2 Date on which conversion was commenced

1.9.3 Date of completion of conversion

1.10 Status of ship:

1.10.1 New ship in accordance with Regulation 1(6))

1.10.2 Existing ship in accordance with Regulation 1(7))

1.10.3 New oil tanker in accordance with Regulation 1(26))

1.10.4 Existing oil tanker in accordance with Regulation 1(27))

1.10.5 The ship has been accepted by the Administration as an 'existing ship' under Regulation 1(7) due to unforeseen delay in delivery)

1.10.6 The ship has been accepted by the Administration as an 'existing ship' under Regulation 1(27) due to unforeseen delay in delivery)

1.10.7 The ship is not required to comply with the provisions of Regulation 24 due to unforeseen delay in delivery)

1.11 Type of ship:

1.11.1 Crude oil tanker)

1.11.2 Product carrier)

1.11.3 Crude oil/product carrier)

1.11.4 Combination carrier)

1.11.5 Ship, other than an oil tanker, with cargo tanks coming under Regulation 2(2) of Annex I to the Convention)

1.11.6 Oil tanker dedicated to the carriage of products referred to in Regulation 15(7))

1.11.7 The ship, being designated as a 'crude oil tanker' operating with COW, is also designated as a 'product carrier' operating with CBT, for which a separate IOPP Certificate has also been issued)

1.11.8 The ship, being designated as a 'product carrier' operating with CBT, is also designated as a 'crude oil tanker' operating with COW, for which a separate IOPP Certificate has also been issued)

### 1.11.9 Chemical tanker carrying oil)

## 2. EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACE BILGES AND OIL FUEL TANKS (Regulations 10 and 16)

### 2.1 Carriage of ballast water in oil fuel tanks:

2.1.1 The ship may under normal conditions carry ballast water in oil fuel tanks)

### 2.2 Type of oil filtering equipment fitted:

2.2.1 Oil filtering (15 ppm) equipment (Regulation 16(4))

2.2.2 Oil filtering (15 ppm) equipment with alarm and automatic stopping device (Regulation 16(5))

2.3 The ship is allowed to operate with the existing equipment until 6 July 1998 (Regulation 16(6)) and fitted with:

2.3.1 Oily-water separating (100 ppm) equipment)

2.3.2 Oil filtering (15 ppm) equipment without alarm)

2.3.3 Oil filtering (15 ppm) equipment without alarm and manualstopping device)

### 2.4 Approval standards:

2.4.1 The separating/filtering equipment:

.1 has been approved in accordance with resolution A.393(X))

.2 has been approved in accordance with resolution A.233(VII))

.3 has been approved in accordance with national standards not based upon resolution A.393(X) or A.233(VII))

.4 has not been approved)

2.4.2 The process unit has been approved in accordance with resolution A.444(XI))

2.4.3 The oil content meter has been approved in accordance with resolution A.393(X))

2.5 Maximum throughput of the system ism<sup>3</sup>/h

2.6 Waiver of Regulation 16

2.6.1 The requirements of Regulation 16(1) or (2) are waived in respect of the ship in accordance with Regulation 16(3)(a). The ship is engaged exclusively on:

.1 Voyages within special area(s): )

.2 Voyages within 12 nautical miles of the nearest land outside special area(s) restricted to: )

2.6.2 The ship is fitted with holding tank(s) having a volume of ..... m<sup>3</sup> for the total retention on board of all oily bilge water)

2.6.3 In lieu of the holding tank the ship is provided with arrangements to transfer bilge water to the slop tank)

3. MEANS FOR RETENTION AND DISPOSAL OF OIL RESIDUES (SLUDGE) (Regulation 17)

3.1 The ship is provided with oil residue (sludge) tanks as follows:

Tank identification

TankLocation

Volume (m<sup>3</sup>)

Frames (from)-(to)

Lateral Position

Total volume: m<sup>3</sup>

3.2 Means for the disposal of residues in addition to the provisions of sludge tanks:

3.2.1 incinerator for oil residues, capacity(l/h )

3.2.2 auxiliary boiler suitable for burning oil residues)

3.2.3 tank for mixing oil residues with fuel oil, capacitym<sup>3</sup>)

3.2.4 other acceptable means: )

4. STANDARD DISCHARGE CONNECTION (Regulation 19)

4.1 The ship is provided with a pipeline for the discharge of residues from machinery bilges to reception facilities, fitted with a standard discharge connection in accordance with Regulation 19)

5. CONSTRUCTION (Regulations 13, 24 and 25)

5.1 In accordance with the requirements of Regulation 13, the ship is-

5.1.1

required to be provided with SBT, PL and COW)

5.1.2

required to be provided with SBT and PL)

5.1.3

required to be provided with SBT)

5.1.4

required to be provided with SBT or COW)

5.1.5

required to be provided with SBT or CBT)

5.1.6

not required to comply with the requirements of Regulation 13)

5.2 Segregated ballast tanks (SBT):

5.2.1

The ship is provided with SBT in compliance with Regulation 13)

5.2.2

The ship is provided with SBT, in compliance with Regulation 13, which are arranged in protective locations (PL) in compliance with Regulation 13E)

5.2.3

SBT are distributed as follows:

Tank

Volume (m3)

Tank

Volume (m3)

Total volume: m3

5.3 Dedicated clean ballast tanks (CBT):

5.3.1

The ship is provided with CBT in compliance with Regulation 13A, and may operate as a product carrier)

5.3.2

CBT are distributed as follows:

Tank

Volume (m3)

Tank

Volume (m3)

Total volume: m3

5.3.3

The ship has been supplied with a valid Dedicated Clean Ballast Tank Operation Manual, which is dated )

5.3.4

The ship has common piping and pump arrangements for ballasting the CBT and handling cargo oil)

5.3.5

The ship has separate independent piping and pumping arrangements for ballasting the CBT)

5.4 Crude oil washing (COW):

5.4.1

The ship is equipped with a COW system in compliance with Regulation 13B)

5.4.2

The ship is equipped with a COW system in compliance with Regulation 13B except that the effectiveness of the system has not been confirmed in accordance with Regulation 13(6) and paragraph 4.2.10 of the Revised COW specifications (resolution A.446(XI))

#### 5.4.3

The ship has been supplied with a valid Crude Oil Washing Operations and Equipment Manual, which is dated )

#### 5.4.4

The ship is not required to be but is equipped with COW in compliance with the safety aspects of Revised COW Specifications (resolution A.446(XI))

### 5.5 Exemption from Regulation 13:

#### 5.5.1

The ship is solely engaged in trade between in accordance with Regulation 13C and is therefore exempted from the requirements of Regulation 13)

#### 5.5.2

The ship is operating with special ballast arrangements in accordance with Regulation 13D and is therefore exempted from the requirements of Regulation 13)

### 5.6 Limitation of size and arrangements of cargo tanks (Regulation 24):

#### 5.6.1

The ship is required to be constructed according to, and complies with, the requirements of Regulation 24)

#### 5.6.2

The ship is required to be constructed according to, and complies with, the requirements of Regulation 24(4) (see Regulation 2(2))

### 5.7 Subdivision and stability (Regulation 25):

#### 5.7.1

The ship is required to be constructed according to, and complies with, the requirements of Regulation 25)

#### 5.7.2



Information and data required under Regulation 25(5) have been supplied to the ship in an approved form)

## 5.8 Double hull construction:

### 5.8.1

The ship is required to be constructed according to Regulation 13F and complies with the requirements of:

- .1 paragraph (3) (double hull construction))
- .2 paragraph (4) (mid-height deck tankers with double side construction))
- .3 paragraph (5) (alternative method approved by the Marine Environment Protection Committee))

### 5.8.2

The ship is required to be constructed according to and complies with the requirements of Regulation 13F(7) (double bottom requirements))

### 5.8.3

The ship is not required to comply with the requirements of Regulation 13F)

### 5.8.4

The ship is subject to Regulation 13G and:

- .1 is required to comply with Regulation 13F not later than )
- .2 is so arranged that the following tanks or spaces are not used for the carriage of oil)

### 5.8.5

The ship is not subject to Regulation 13G)

## 6. RETENTION OF OIL ON BOARD (Regulation 15)

### 6.1 Oil discharge monitoring and control system:

#### 6.1.1

The ship comes under category ..... oil tanker as defined in resolution A.496(XII) or A.586(14)\* (delete as appropriate))

### 6.1.2

The system comprises:

- .1 control unit)
- .2 computing unit)
- .3 calculating unit)

### 6.1.3

The system is fitted with:

- .1 a starting interlock)
- .2 automatic stopping device)

### 6.1.4

The oil content meter is approved under the terms of resolution A.393(X) or A.586(14) (delete as appropriate) suitable for:

- .1 crude oil)
- .2 black products)
- .3 white products)
- .4 oil-like noxious liquid substances as listed in the attachment to the Certificate)

### 6.1.5

The ship has been supplied with an operation manual for the oil discharge monitoring and control system)

## 6.2 Slop tanks:

### 6.2.1

The ship is provided with ..... dedicated slop tank(s) with the total capacity of ..... m<sup>3</sup>, which is ..... % of the oil carrying capacity, in accordance with:

- .1 Regulation 15(2)(c))
- .2 Regulation 15(2)(c)(i))

.3 Regulation 15(2)(c)(ii))

.4 Regulation 15(2)(c)(iii))

6.2.2

Cargo tanks have been designed as slop tanks)

6.3 Oil/water interface detectors:

6.3.1

The ship is provided with oil/water interface detectors approved under the terms of resolution MEPC.5(XIII))

6.4 Exemptions from Regulation 15:

6.4.1

The ship is exempted from the requirements of Regulation 15(1), (2) and (3) in accordance with Regulation 15(7))

6.4.2

The ship is exempted from the requirements of Regulation 15(1), (2) and (3) in accordance with Regulation 2(2))

6.5 Waiver of Regulation 15:

6.5.1

The requirements of Regulation 15(3) are waived in respect of the ship in accordance with Regulation 15(5)(b). The ship is engaged exclusively on:

.1 Specific trade under Regulation 13C: )

.2 Voyages within special area(s): )

.3 Voyages within 50 nautical miles of the nearest land outside special area(s) of 72 hours or less in duration restricted to: )

7. PUMPING, PIPING AND DISCHARGE ARRANGEMENTS (Regulation 18)

7.1 The overboard discharge outlets for segregated ballast are located:

7.1.1

above the waterline)

7.1.2

below the waterline)

7.2 The overboard discharge outlets, other than the discharge manifold, for clean ballast are located:\*

7.2.1

above the waterline)

7.2.2

below the waterline)

7.3 The overboard discharge outlets, other than the discharge manifold, for dirty ballast water or oil contaminated water from cargo tank areas are located:\*

7.3.1

above the waterline)

7.3.2

below the waterline in conjunction with the part flow arrangements in compliance with Regulation 18(6)(e))

7.3.3

below the waterline)

7.4 Discharge of oil from cargo pumps and oil lines (Regulation 18(4) and (5)):

7.4.1

Means to drain all cargo pumps and oil lines at the completion of cargo discharge:

.1 drainings capable of being discharged to a cargo tank or slop tank)

.2 for discharge ashore a special small diameter line is provided)

8. SHIPBOARD OIL POLLUTION EMERGENCY PLAN (Regulation 26)

8.1 The ship is provided with a shipboard oil pollution emergency plan in compliance with Regulation 26)

## 9. EQUIVALENT ARRANGEMENTS FOR CHEMICAL TANKERS CARRYING OIL

9.1 As equivalent arrangements for the carriage of oil by a chemical tanker, the ship is fitted with the following equipment in lieu of slop tanks (paragraph 6.2) and oil/water interface detectors (paragraph 6.3):

### 9.1.1

Oily-water separating equipment capable of producing effluent with oil content less than 100 ppm, with the capacity of  $m^3/h$  )

### 9.1.2

a holding tank with the capacity of  $m^3$  )

### 9.1.3

a tank for collecting tank washings which is:

.1 a dedicated tank)

.2 a cargo tank designated as a collecting tank)

### 9.1.4

a permanently installed transfer pump for overboard discharge of effluent containing oil through the oily-water separating equipment)

9.2 The oily-water separating equipment has been approved under the terms of resolution A.393(X) and is suitable for the full range of Annex I products)

### 9.3

The ship holds a valid Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk)

10. OIL-LIKE NOXIOUS LIQUID SUBSTANCES The ship is permitted in accordance with Regulation 14 of Annex II to the Convention to carry the oil-like noxious liquid substances specified in the list\* attached)

11. EXEMPTION Exemptions have been granted by the Administration from the requirements of Chapter II of Annex I to the Convention in accordance with Regulation 2(4)(a) on those items listed under paragraph(s) of this Record )

12. EQUIVALENTS (Regulation 3) Equivalents have been approved by the Administration

for certain requirements of Annex I in respect of the items listed under paragraph(s) of this Record )

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

Issued at

(Place of issue of the Record)

.....19 ... (Signature of duly authorized officer issuing the Record) (Seal or stamp of the issuing authority, as appropriate)".

### **Substitution of Appendix III to Annex I to Convention**

15. The following Appendix is hereby substituted for Appendix III to Annex I to the Convention:

#### **"Appendix III**

FORM OF OIL RECORD BOOK

#### **OIL RECORD BOOK**

PART I-Machinery space operations

#### **(All ships)**

#### **Name of ship:Distinctive number or letters:Gross tonnage:Period from: to:**

Note: Oil Record Book Part I shall be provided to every oil tanker of 150 tons gross tonnage and above and every ship of 400 tons gross tonnage and above, other than oil tankers, to record relevant machinery space operations. For oil tankers, Oil Record Book Part II shall also be provided to record relevant cargo/ballast operations.

#### **INTRODUCTION**

The following pages of this section show a comprehensive list of items of machinery space operations which are, when appropriate, to be recorded in the Oil Record Book in accordance with Regulation 20 of Annex I to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). The items have been grouped into operational sections, each of which is denoted by a letter code.

When making entries in the Oil Record Book, the date, operational code and item number shall be inserted in the appropriate columns and the required particulars shall be recorded chronologically in the blank spaces.

Each completed operation shall be signed for and dated by the officer or officers in charge. Each completed page shall be signed by the master of the ship.

**The Oil Record Book contains many references to oil quantity. The limited accuracy of tank measurement devices, temperature variations and clingage will affect the accuracy of these readings. The entries in the Oil Record Book should be considered accordingly.**

## **LIST OF ITEMS TO BE RECORDED**

### **(A) BALLASTING OR CLEANING OF OIL FUEL TANKS**

1. Identity of tank(s) ballasted.

2.

Whether cleaned since they last contained oil and, if not, type of oil previously carried.

3.

Cleaning process:

.1

position of ship and time at the start and completion of cleaning;

.2

identify tank(s) in which one or another method has been employed (rinsing through, steaming, cleaning with chemicals, type and quantity of chemicals used);

.3

identify of tank(s) into which cleaning water was transferred.

4. Ballasting:

.1

position of ship and time at start and end of ballasting;

.2

quantity of ballast if tanks are not cleaned;

.3

position of ship at start of cleaning;

.4

position of ship at start of ballasting.

(B) DISCHARGE OF DIRTY BALLAST OR CLEANING WATER FROM OIL FUEL TANKS REFERRED TO UNDER SECTION (A)

5. Identity of tank(s).

6.

Position of ship at start of discharge.

7.

Position of ship on completion of discharge.

8.

Ship's speed(s) during discharge.

9.

Method of discharge:

.1

through 100 ppm equipment;

.2

through 15 ppm equipment;

.3

to reception facilities.

10. Quantity discharged.

(C) COLLECTION AND DISPOSAL OF OIL RESIDUES (SLUDGE)

11. Collection of oil residues Quantity of oil residues (sludge) retained on board at the end of a voyage, but not more frequently than once a week. When ships are on short voyages, the quantity should be recorded weekly\*:

.1



separated sludge (sludge resulting from purification of fuel and lubricating oils) and other residues, if applicable:

-identity of tank(s)

-capacity of tank(s) m<sup>3</sup>

-total quantity of retention m<sup>3</sup>;

.2

other residues (such as oil residues resulting from drainages, leakages, exhausted oil, etc., in the machinery spaces), if applicable due to tank arrangement in addition to .1:

-identity of tank(s)

-capacity of tank(s) m<sup>3</sup>

-total quantity of retention m<sup>3</sup>.

12. Methods of disposal of residue State quantity of oil residues disposed of, the tank(s) emptied and the quantity of contents retained:

.1

To reception facilities (identify port)\*\*;

.2

transferred to another (other) tank(s) (indicate tank(s) and the total content of tank(s));

.3

incinerated (indicate total time of operation);

.4

other method (state which).

**(D) NON-AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES**

13. Quantity discharged or disposed of.

14.

Time of discharge or disposal (start and stop).

15.

Method of discharge or disposal:

.1

through 100 ppm equipment (state position at start and end);

.2

through 15 ppm equipment (state position at start and end);

.3

to reception facilities (identify port)\*\*;

.4

transfer to slop tank or holding tank (indicate tank(s); state quantity transferred and the total quantity retained in tank(s)).

(E) AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES

16. Time and position of ship at which the system has been put into automatic mode of operation for discharge overboard.

17.

Time when the system has been put into automatic mode of operation for transfer of bilge water to holding tank (identify tank).

18.

Time when the system has been put to manual operation.

19.

Method of discharge overboard:

.1

through 100 ppm equipment;

.2

through 15 ppm equipment.

#### (F) CONDITION OF OIL DISCHARGE MONITORING AND CONTROL SYSTEM

20. Time of system failure.

21.

Time when system has been made operational.

22.

Reasons for failure.

#### (G) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

23. Time of discharge.

24.

Place or position of ship at time of discharge.

25.

Approximate quantity and type of oil.

26.

Circumstances of discharge or escape, the reasons therefor and general remarks.

#### (H) BUNKERING OF FUEL OR BULK LUBRICATING OIL

27. Bunkering

.1

Place of bunkering.

.2

Time of bunkering.

.3

Type and quantity of fuel oil and identity of tank(s) (state quantity added and total quantity of tank(s)).

.4

Type and quantity and lubricating oil and identity of tank(s) (state quantity added and total content of tank(s)).

**(I) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS**

NAME OF SHIP

DISTINCTIVE NUMBER OR LETTERS

**CARGO/BALLAST OPERATIONS (OIL TANKERS)\* /**

**MACHINERY SPACE OPERATIONS (ALL SHIPS)\* Date**

Code (letter)

Item (number)

Record of operations/signature of officer in charge

Signature of master

**OIL RECORD BOOK**

PART II-Cargo/ballast operations

**(Oil tankers)**

**Name of ship: Distinctive number or letters: Gross tonnage Period from: to:**

Note: Every oil tanker of 150 tons gross tonnage and above shall be provided with Oil Record Book Part II to record relevant cargo/ballast operations. Such a tanker shall also be provided with Oil Record Book Part I to record relevant machinery space operations.

NAME OF SHIP

DISTINCTIVE NUMBER OR LETTERS

**PLAN VIEW OF CARGO AND SLOP TANKS(to be completed on board)**

Identification of the tanks

Capacity

Depth of slop tank(s):

(Give the capacity of each tank and the depth of slop tank(s)).

## **INTRODUCTION**

The following pages of this section show a comprehensive list of items of cargo and ballast operations which are, when appropriate, to be recorded in the Oil Record Book in accordance with Regulation 20 of Annex I to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). The items have been grouped into operation sections, each of which is denoted by a code letter.

When making entries in the Oil Record Book, the date, operational code and item number shall be inserted in the appropriate columns and the required particulars shall be recorded chronologically in the blank spaces.

Each completed operation shall be signed for and dated by the officer or officers in charge. Each completed page shall be countersigned by the master of the ship. In respect of the oil tankers engaged in specific trades in accordance with Regulation 13C of Annex I to MARPOL 73/78, appropriate entry in the Oil Record Book shall be endorsed by the competent Port State authority\*.

The Oil Record Book contains many references to oil quantity. The limited accuracy of tank measurement devices, temperature variations and clingage will affect the accuracy of these readings. The entries in the Oil Record Book should be considered accordingly.

## **LIST OF ITEMS TO BE RECORDED**

### **(A) LOADING OF OIL CARGO**

1. Place of loading.

2.

Type of oil loaded and identity of tank(s).

3.

Total quantity of oil loaded (state quantity added and the total content of tank(s)).

### **(B) INTERNAL TRANSFER OF OIL CARGO DURING VOYAGE**

4. Identity of the tank(s)

.1

From:

.2

To: (state quantity transferred and total quantity of tank(s)).

5. Was (were) the tank(s) in 4.1 emptied? (If not, state the quantity retained)

(C) UNLOADING OF OIL CARGO

6. Place of unloading.

7.

Identity of tank(s) unloaded.

8.

Was (were) the tank(s) emptied? (If not, state quantity retained)

(D) CRUDE OIL WASHING (COW TANKERS ONLY) (To be completed for each tank being crude oil washed)

9. Port where crude oil washing was carried out or ship's position if carried out between two discharge ports.

10.

Identity of tank(s) washed\*\*.

11.

Number of machines in use.

12.

Time of start of washing.

13.

Washing pattern employed\*\*\*.

14.

Washing line pressure.

15.

Time washing was completed or stopped.

16.

State method of establishing that tank(s) was (were) dry.

17.

Remarks\*\*\*\*.

#### (E) BALLASTING OF CARGO TANKS

18. Position of ship at start and end of ballasting.

19.

Ballasting process:

.1

identity of tank(s) ballasted;

.2

time of start and end;

.3

quantity of ballast received. Indicate total quantity of ballast for each tank involved in the operation.

#### (F) BALLASTING OF DEDICATED CLEAN BALLAST TANKS (CBT TANKERS ONLY)

20. Identity of tank(s) ballasted.

21.

Position of ship when water intended for flushing or port ballast was taken to dedicated clean ballast tank(s).

22.

Position of ship when pump(s) and lines were flushed to slop tank.

23.

Quantity of the oily water which, after line flushing, is transferred to the slop tank(s) or cargo tank(s) in which slop is preliminarily stored (identify tank(s)). State the total quantity.

24.

Position of ship when additional ballast water was taken to dedicated clean ballast tank(s).

25.

Time and position of ship when valves separating the dedicated clean ballast tanks from cargo and stripping lines were closed.

26.

Quantity of clean ballast taken on board.

#### (G) CLEANING OF CARGO TANKS

27. Identity of tank(s) cleaned.

28.

Port or ship's position.

29.

Duration of cleaning.

30.

Method of cleaning\*.

31.

Tank washings transferred to:

.1

reception facilities (state port and quantity)\*\*;

.2

slop tank(s) or cargo tank(s) designated as slop tank(s) (identify tank(s); state quantity transferred and total quantity).

#### (H) DISCHARGE OF DIRTY BALLAST

32. Identity of tank(s).



33.

Position of ship at start of discharge into the sea.

34.

Position of ship on completion of discharge into the sea.

35.

Quantity discharged into the sea.

36.

Ship's speed(s) during discharge.

37.

Was the discharge monitoring and control system in operation during the discharge?

38.

Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?

39.

Quantity of oily water transferred to slop tank(s) (identify slop tank(s). State total quantity.)

40.

Discharged to shore reception facilities (identify port and quantity involved)\*\*.

(I) DISCHARGE OF WATER FROM SLOP TANKS INTO THE SEA

41. Identity of slop tank(s).

42.

Time of settling from last entry of residues.

43.

Time of settling from last discharge.

44.

Time and position of ship at start of discharge.

45.

Ullage of total contents at start of discharge.

46.

Ullage of oil/water interface at start of discharge.

47.

Bulk quantity discharged and rate of discharge.

48.

Final quantity discharged and rate of discharge.

49.

Time and position of ship on completion of discharge.

50.

Was the discharge monitoring and control system in operation during the discharge?

51.

Ullage of oil/water interface on completion of discharge.

52.

Ship's speed(s) during discharge.

53.

Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?

54. Confirm that all applicable valves in the ship's piping system have been closed on completion of discharge from the slop tanks.

(J) DISPOSAL OF RESIDUES AND OILY MIXTURES NOT OTHERWISE DEALT WITH

55. Identity of tank(s).

56.

Quantity disposed of from each tank. (State the quantity retained.)

57.

Method of disposal:

.1

to reception facilities (identify port and quantity involved)\*;

.2

mixed with cargo (state quantity);

.3

transferred to (an)other tank(s): identify tank(s); state quantity transferred and total quantity in tank(s);

.4

other method (state which); state quantity disposed of.

#### (K) DISCHARGE OF CLEAN BALLAST CONTAINED IN CARGO TANKS

58. Position of ship at start of discharge of clean ballast.

59.

Identity of tank(s) discharged.

60.

Was (were) the tank(s) empty on completion?

61.

Position of ship on completion if different from 58.

62.

Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?

#### (L) DISCHARGE OF CLEAN BALLAST FROM DEDICATED CLEAN BALLAST TANKS (CBT TANKERS ONLY)

63. Identity of tank(s) discharged.

64.

Time and position of ship at start of discharge of clean ballast into the sea.

65.

Time and position of ship on completion of discharge into the sea.

66.

Quantity discharged:

.1 into the sea; or

.2 to reception facility (identify port).

67. Was there any indication of oil contamination of the ballast water before or during discharge into the sea?

68.

Was the discharge monitored by an oil content meter?

69.

Time and position of ship when valves separating dedicated clean ballast tanks from the cargo and stripping lines were closed on completion of deballasting.

(M) CONDITION OF OIL DISCHARGE MONITORING AND CONTROL SYSTEM

70. Time of system failure.

71.

Time when system has been made operational.

72.

Reasons for failure.

(N) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

73. Time of occurrence.

74. Port or ship's position at time of occurrence.

75. Approximate quantity and type of oil.

76. Circumstances of discharge or escape, the reasons therefor and general remarks.

(O) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS

**TANKER ENGAGED IN SPECIFIC TRADES**

(P) LOADING OF BALLAST WATER

77. Identity of tank(s) ballasted.

78. Position of ship when ballasted.

79. Total quantity of ballast loaded in cubic metres.

80. Remarks.

(Q) RE-ALLOCATION OF BALLAST WATER WITHIN THE SHIP

81. Reasons for re-allocation.

(R) BALLAST WATER DISCHARGE TO RECEPTION FACILITY

82. Port(s) where ballast water was discharged.

83. Name or designation of reception facility.

84. Total quantity of ballast water discharged in cubic metres.

85. Date, signature and stamp of port authority official.

NAME OF SHIP

DISTINCTIVE NUMBER OR LETTERS

**CARGO/BALLAST OPERATIONS (OIL TANKERS)\* /**

**MACHINERY SPACE OPERATIONS (ALL SHIPS)\* Date**

Code (letter)

Item (number)

Record of operations/signature of officer in charge

Signature of master".

## Amendment of Regulation 1 of Annex II to Convention

16. Regulation 1 of Annex II to the Convention is hereby amended-

(a) by the substitution for paragraphs (6) and (7) of the following paragraphs, respectively:

"(6) 'Noxious liquid substance' means any substance [**designated**] referred to in Appendix II to this Annex or provisionally assessed under the provisions of Regulation 3(4) as falling into Category A, B, C or D.

(7) 'Special area' means a sea area where for recognised technical reasons in relation to its oceanographic and ecological condition and to its peculiar transportation traffic the adoption of special mandatory methods for the prevention of sea pollution by noxious liquid substances is required.

Special areas shall be:

(a)

The Baltic Sea area;

(b)

The Black Sea area; and

(c)

The Antarctic area."; and

(b) by the insertion after paragraph (9) of the following paragraph:

"(9A) 'Antarctic area' means the sea area south of latitude 60IAoS."

## Amendment of Regulation 2 of Annex II to Convention

17. Regulation 2 of Annex II to the Convention is hereby amended by the addition of the following paragraph:

"(7) (a) Where an amendment to this Annex and to the International Bulk Chemical Code and the Bulk Chemical Code involves changes to the structure or equipment and fittings due to the upgrading of the requirements for the carriage of certain substances, the Administration may modify or delay for a specified period the application of such an amendment to ships constructed before the date of entry into force of that amendment, if the immediate application of such an amendment is considered

unreasonable or impracticable. Such relaxation shall be determined with respect to each substance, having regard to the guidelines developed by the Organization.\*

(b) The Administration allowing a relaxation of the application of an amendment under this paragraph shall submit to the Organization a report giving details of the ship or ships concerned, the cargoes carried, the trade in which each ship is engaged and the justification for the relaxation, for circulation to the Parties to the Convention for their information and appropriate action, if any.".

### **Amendment of Regulation 3 of Annex II to Convention**

**18.** Regulation 3 of Annex II to the Convention is hereby amended by the substitution for paragraph (3) of the following paragraph:

"(3) Noxious liquid substances carried in bulk which are at present categorized as Category A, B, C or D and subject to the provisions of this Annex are referred to in Appendix II to this Annex.".

### **Amendment of Regulation 4 of Annex II to Convention**

**19.** Regulation 4 of Annex II to the Convention is hereby amended by the substitution for paragraphs (1) and (2) of the following paragraphs, respectively:

"(1) The substances [**listed**] referred to in Appendix III to this Annex have been evaluated and found to fall outside [**the Categories**] Category A, B, C [and] or D, as defined in Regulation 3(1) of this Annex because they are [**presently**] at present considered to present no harm to human health, marine resources, amenities or other legitimate uses of the sea, when discharged into the sea from tank cleaning or deballasting [**operations**] operation.

(2) The discharge of bilge or ballast water or other residues or mixtures containing only substances [**listed**] referred to in Appendix III to this Annex shall not be subject to any requirement of this Annex."

### **Amendment of Regulation 5 of Annex II to Convention**

**20.** Regulation 5 of Annex II to the Convention is hereby amended-

(a) by the substitution for the words preceding paragraphs (1) and (7) of the following words:

"Subject to the provisions of paragraph (14) of this Regulation and of Regulation 6 of this Annex,";

(b) by the substitution in paragraph (1) for the words preceding subparagraph (a) of the following words:

"The discharge into the sea of substances in Category A as defined in Regulation 3(1)(a) of this Annex or of those provisionally assessed as such or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited. If tanks containing such substances or mixtures are to be washed, the resulting residues shall be discharged to a reception facility until the concentration of the substances in the effluent to such facility is at or below **[the residual concentration prescribed for that substance in column III of Appendix II to this Annex] 0.1% by weight** and until the tank is empty, with the exception of Phosphorus, yellow or white for which the residual concentration shall be at 0.01% by weight. Any water subsequently added to the tank may be discharged into the sea when all the following conditions are also satisfied:";

(c) by the substitution in paragraph (7) for the words preceding subparagraph (a) of the following words:

"The discharge into the sea of substances of Category A as defined in Regulation 3(1)(a) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited. If tanks containing such substances or mixtures are to be washed, the resulting residues shall be discharged to a reception facility which the States bordering the Special area shall provide in accordance with Regulation 7 of this Annex, until the concentration of the substances in the effluent to such facility is at or below **[the residual concentration prescribed for that substance in column IV of Appendix II to this Annex] 0.05% by weight** and until the tank is empty, with the exception of Phosphorus, yellow or white for which the residual concentration shall be 0.005% by weight. Any water subsequently added to the tank may be discharged into the sea when all the following conditions are also satisfied:"; and

(d) by the addition of the following paragraph:

"(14) In respect of the Antarctic area any discharge into the sea of noxious liquid substances or mixtures containing such substances shall be prohibited."

## **Amendment of Regulation 8 of Annex II to Convention**

**21.** Regulation 8 of Annex II to the Convention is hereby amended by the substitution for paragraph (3) of the following paragraph:

"(3) If the tank is to be washed in accordance with **[subparagraph]** paragraph (2)(a), the effluent from the tank washing operation shall be discharged to a reception facility at least until the concentration of the substance in the discharge, as indicated by analyses of samples of the effluent taken by a surveyor, has fallen to the **[residual]** concentration specified **[for that substance]** in **[Appendix II]** Regulation 5(1) and (7), as applicable, of this Annex. When the required **[residual]** concentration has been achieved, remaining tank washings shall continue to be discharged to the reception facility until the tank is empty. Appropriate entries of these operations shall be made in



the Cargo Record Book and endorsed by the surveyor referred to under paragraph (1)(a) of this Regulation."

### **Amendment of Regulation 14 of Annex II to Convention**

22. Regulation 14 of Annex II to the Convention is hereby amended by the substitution in the words preceding subparagraph (a) for the words "designated in Appendix II" of the words "referred to in Appendix II".

### **Addition of Regulation 15 to Annex II to Convention**

23. The following Regulation is hereby added to Annex II to the Convention:

#### **"Regulation 15**

##### **Port State Control on Operational Requirements**

(1) A ship when in a port of another Party is subject to inspection by officers duly authorized 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 pollution by noxious liquid substances.

(2) In the circumstances given in paragraph (1) of this Regulation, the Party shall take such steps as will 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.

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

### **Substitution of Appendices II and III to Annex II to Convention**

24. The following Appendices are hereby substituted for Appendices II and III to Annex II to the Convention:

#### **"Appendix II**

##### **LIST OF NOXIOUS LIQUID SUBSTANCES CARRIED IN BULK**

Noxious liquid substances carried in bulk and which are at present categorized as Category A, B, C or D and subject to the provisions of this Annex, are so indicated in the pollution category column of Chapters 17 and 18 of the International Bulk Chemical Code.

## Appendix III

### LIST OF OTHER LIQUID SUBSTANCES

Liquid substances carried in bulk which are identified as falling outside Category A, B, C or D and not subject to the provisions of this Annex are indicated as 'III' in the pollution category column of Chapters 17 and 18 of the International Bulk Chemical Code."

### Addition of Annex III to Convention

25. The following Annex is hereby added to the Convention:

#### "ANNEX III

### REGULATIONS FOR THE PREVENTION OF POLLUTION BY HARMFUL SUBSTANCES CARRIED BY SEA IN PACKAGED FORM

#### Regulation 1

#### Application

##### 1.

**Unless expressly provided otherwise, the regulations of this Annex apply to all ships carrying harmful substances in packaged form.**

##### 1.1

For the purposes of this Annex, 'harmful substances' are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods (IMDG) Code.\*

##### 1.2

Guidelines for the identification of harmful substances in packaged form are given in the Appendix to this Annex.

##### 1.3

For the purposes of this Annex, 'packaged form' is defined as the forms of containment specified for harmful substances in the IMDG Code.

##### 2.

The carriage of harmful substances is prohibited, except in accordance with the provisions of this Annex.

##### 3.

To supplement the provisions of this Annex, the Government of each Party to the Convention shall issue, or cause to be issued, detailed requirements on packing, marking, labelling, documentation, stowage, quantity limitations and exceptions for preventing or minimizing pollution of the marine environment by harmful substances.\*

4.

For the purposes of this Annex, empty packagings which have been used previously for the carriage of harmful substances shall themselves be treated as harmful substances unless adequate precautions have been taken to ensure that they contain no residue that is harmful to the marine environment.

5.

The requirements of this Annex do not apply to ships' stores and equipment.

## Regulation 2

### Packing

**Packages shall be adequate to minimize the hazard to the marine environment, having regard to their specific contents.**

## Regulation 3

### Marking and Labelling

1.

**Packages containing a harmful substance shall be durably marked with the correct technical name (trade names alone shall not be used) and, further, shall be durably marked or labelled to indicate that the substance is a marine pollutant. Such identification shall be supplemented where possible by any other means, for example, by use of the relevant United Nations number.**

2.

The method of marking the correct technical name and of affixing labels on packages containing a harmful substance shall be such that this information will still be identifiable on packages surviving at least three months' immersion in the sea. In considering suitable marking and labelling, account shall be taken of the durability of the materials used and of the surface of the package.

3.

Packages containing small quantities of harmful substances may be exempted from the marking requirements.\*

## Regulation 4

### Documentation\*\*

#### 1.

**In all documents relating to the carriage of harmful substances by sea where such substances are named, the correct technical name of each such substance shall be used (trade names alone shall not be used) and the substance further identified by the addition of the words 'MARINE POLLUTANT'.**

#### 2.

The shipping documents supplied by the shipper shall include, or be accompanied by, a signed certificate or declaration that the shipment offered for carriage is properly packaged and marked, labelled or placarded as appropriate and in proper condition for carriage to minimize the hazard to the marine environment.

#### 3.

Each ship carrying harmful substances shall have a special list or manifest setting forth the harmful substances on board and the location thereof. A detailed stowage plan which sets out the location of the harmful substances on board may be used in place of such special list or manifest. Copies of such documents shall also be retained on shore by the owner of the ship or his or her representative until the harmful substances are unloaded. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

#### 4.

When the ship carries a special list or manifest or a detailed stowage plan, required for the carriage of dangerous goods by the International Convention for the Safety of Life at Sea, 1974, as amended, the documents required by this Regulation may be combined with those for dangerous goods. Where documents are combined, a clear distinction shall be made between dangerous goods and harmful substances covered by this Annex.

## Regulation 5

### Stowage

**Harmful substances shall be properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board.**

## Regulation 6

### Quantity Limitations

Certain harmful substances may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried aboard any one ship. In limiting the quantity, due consideration shall be given to size, construction and equipment of the ship, as well as the packaging and the inherent nature of the substances.

## Regulation 7

### Exceptions

#### 1.

**Jettisoning of harmful substances carried in packaged form shall be prohibited, except where necessary for the purpose of securing the safety of the ship or saving life at sea.**

2. Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard, provided that compliance with such measures does not impair the safety of the ship and persons on board.

## Regulation 8

### Port State Control on Operational Requirements

**1. A ship when in a port of another Party is subject to inspection by officers duly authorized 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 pollution by harmful substances.**

2. In the circumstances given in paragraph 1 of this Regulation, the Party shall take such steps as will 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.

4. Nothing in this Regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

## Appendix

### **GUIDELINES FOR THE IDENTIFICATION OF HARMFUL SUBSTANCES IN PACKAGED FORM**

For the purposes of this Annex, substances identified by any one of the following criteria are harmful substances:

- bioaccumulated to a significant extent and known to produce a hazard to aquatic life or to human health (Hazard Rating '+' in column A\*); or
- bioaccumulated with attendant risk to aquatic organisms or to human health with a short retention of the order of one week or less (Hazard Rating 'Z' in column A\*); or
- liable to produce tainting of seafood (Hazard Rating 'T' in column A\*); or
- highly toxic to aquatic life, defined by a LC50/96\*\* hour less than 1 ppm (Hazard Rating '4' in column B\*)."

## **Amendment of Regulation 5 of Annex V to Convention**

26. Regulation 5 of Annex V to the Convention is hereby amended-

(a) by the substitution in paragraph (1) for the words preceding subparagraph (a) of the following words:

"For the purposes of this Annex the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, [and] the [Gulf] Gulfs area, the North Sea area, the Antarctic area and the Wider Caribbean Region, including the Gulf of Mexico and the Caribbean Sea, which are defined as follows:"

(b) by the addition to paragraph (1) of the following subparagraphs:

"(f) The North Sea area means the North Sea proper, including seas therein with the boundary between-

(i) the North Sea southwards of latitude 62°N and eastwards of longitude 4°W;

(ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57°44.8'N; and

(iii) the English Channel and its approaches eastwards of longitude 51A°W and northward of latitude 48°30'N.

(g) The Antarctic area means the sea area south of 60IA° south latitude.

(h) The Wider Caribbean Region, as defined in Article 2, paragraph 1 of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena de Indias, 1983), means the Gulf of Mexico and the Caribbean Sea proper including the bays and seas therein and that portion of the Atlantic Ocean within the boundary constituted by the 30IA°N parallel from Florida eastward to 77IA°30'W meridian, thence a rhumb line to the intersection of 20IA°N parallel and 59IA°

AoW meridian, thence a rhumb line to the intersection of 71°20'N parallel and 50°W meridian, thence a rhumb line drawn south-westerly to the eastern boundary of French Guiana.";

(c) by the substitution for subparagraph (b) of paragraph (2) of the following subparagraph:

"(b) disposal into the sea of food wastes shall except as provided in subparagraph (c) be made as far as practicable from land, but in any case not less than 12 nautical miles from the nearest land.";

(d) by the addition to paragraph (2) of the following subparagraph:

"(c) disposal into the Wider Caribbean Region of food wastes which have been passed through a comminuter or grinder shall be made as far as practicable from land, but in any case not subject to Regulation 4 not less than 3 nautical miles from the nearest land. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 millimetres."; and

(e) by the addition of the following paragraph:

"(5) Notwithstanding paragraph (4) of this Regulation, the following rules apply to the Antarctic area:

(a) The Government of each Party to the Convention whose ports are used by ships departing en route to or arriving from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all garbage from all ships, without causing undue delay, and according to the needs of the ships using them.

(b) The Government of each Party to the Convention shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, have sufficient capacity on board for the retention of all garbage while operating in the area and that agreements have been concluded to discharge such garbage at a reception facility after leaving the area.".

### **Amendment of Regulation 6 of Annex V to Convention**

27. Regulation 6 of Annex V to the Convention is hereby amended by the substitution for paragraph (c) of the following paragraph:

"(c) the accidental loss of synthetic fishing nets [**or synthetic material incidental to the repair of such nets**], provided that all reasonable precautions have been taken to prevent such loss."

### **Addition of Regulation 8 to Annex V to Convention**

28. The following Regulation is hereby added to Annex V to the Convention:

## "Regulation 8

### Port State Control on Operational Requirements

(1) A ship when in a port of another Party is subject to inspection by officers duly authorized 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 pollution by garbage.

(2) In the circumstances given in paragraph (1) of this Regulation, the Party shall take such steps as will 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.

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

### MEMORANDUM ON THE OBJECTS OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS AMENDMENT BILL, 1996

1. The Republic is a party to the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978 (MARPOL 73/78), which is contained in the Schedule to the International Convention for the Prevention of Pollution from Ships Act, 1986 (Act No. 2 of 1986) (the Act). The adoption and entry into force of numerous amendments to MARPOL 73/78 in recent years necessitates the amendment of the Schedule to the Act so as to give domestic effect to these amendments. The Schedule is also amended by the addition of Annex III (Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form) to MARPOL 73/78, pursuant to the Republic's proposed accession to the Annex.

2. (a) The definition of "Minister" in the Act refers to the Minister of Transport Affairs, whereas it should refer to the Minister of Transport. The definition of "Minister" is therefore amended.

(b) The definitions of "Director-General" , "exclusive economic zone", "ship", "South African ship" and "territorial waters" are inserted in the Act consequent on the amendments proposed in clause 2.

(c) The definitions of "owner" and "master" are inserted in the Act consequent on the amendments proposed in clause 4 (clause 1).

3. The Act is amended so as to make further provision regarding the application and



interpretation of MARPOL 73/78 as contained in the Schedule to the Act. MARPOL 73/78 is made applicable in respect of South African ships and ships otherwise operated under the authority of the Republic, wherever they may be, and in respect of other ships, while they are in the Republic or its territorial waters or exclusive economic zone (clause 2).

4. The Act is amended so as to provide anew for certain offences and penalties (clauses 3, 4 and 5).

5. The Act is extended to the Prince Edward Islands (clause 6).

6. The Schedule to the Act is amended so as to give effect to amendments to MARPOL 73/78, and by the addition thereto of Annex III to MARPOL 73/78 (clause 8).

7. Provision is made for the commencement of section 8 of the Act so as to allow an opportunity for accession to the said Annex III by the Republic (clause 10).

No other department or body is involved with the administration of the Act.

\*Reference is made to the Recommendation on International Performance and Test Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by resolution A.393(X).\.

\*Reference is made to the Recommendation on International Performance Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by resolution A.233(VII).\.

\*Reference is made to the Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers adopted by the Organization by resolution [A.496(XII)] A.586(14).\.

\*Reference is made to the Recommendation on International Performance and Test Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by resolution A.393(X).\.

\*Reference is made to 'Guidelines for the development of shipboard oil pollution emergency plans' to be developed by the Organization.\.

\*\*Reference is made to General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants adopted by the Organization by resolution A.648(16).\.

\*Oil tankers the keels of which are laid, or which are at a similar stage of construction, on or after 2 October 1986 should be fitted with a system approved under resolution A.586(14).\.

\*Only those outlets which can be monitored are to be indicated.\.

\*The list of oil-like noxious substances permitted for carriage, signed, dated and certified by a seal or a stamp of the issuing authority shall be attached.\.

\*Only in tanks listed in item 3 of Forms A and B of the Supplement to the IOPP Certificate.\.

\*\*Ships' masters should obtain from the operator of the reception facilities, which include barges and tank trucks, a receipt or certificate detailing the quantity of tank washings, dirty ballast, residues or oily mixtures transferred, together with the time and date of the transfer. This receipt or certificate, if attached to the Oil Record Book may aid the master of the ship in proving that his or her ship was not involved in an alleged pollution incident. The receipt or certificate should be kept together with the Oil Record Book.\.

\*Delete as appropriate.\.

\*This sentence should only be inserted for the Oil Record Book of a tanker engaged in a specific trade. \.

\*\*When an individual tank has more machines than can be operated simultaneously, as described in the Operations and Equipment Manual, then the section being crude oil washed should be identified, e.g. No. 2 centre, forward section.\.

\*\*\*In accordance with the Operations and Equipment Manual, enter whether single-stage or multi-stage method of washing is employed. If multi-stage method is used, give the vertical arc covered by the machines and the number of times that arc is covered for that particular stage of the programme.\.

\*\*\*\*If the programmes given in the Operations and Equipment Manual are not followed, then the reasons must be given under Remarks.\.

\*Hand-hosing, machine washing and/or chemical cleaning. Where chemically cleaned, the chemical concerned and amount used should be stated.\.

\*\*Ships' masters should obtain from the operator of the reception facilities which include barges and tank trucks a receipt or certificate detailing the quantity of tank washings, dirty ballast, residues or oily mixtures transferred, together with the time and date of the transfer. This receipt or certificate, if attached to the Oil Record Book, may aid the master of the ship in proving that his or her ship was not involved in an alleged pollution incident. The receipt or certificate should be kept together with the Oil Record Book.\.

\*Ships' masters should obtain from the operator of the reception facilities, which include barges and tank trucks, a receipt or certificate detailing the quantity of tank

washings, dirty ballast, residues or oily mixtures transferred, together with the time and date of the transfer. This receipt or certificate, if attached to the Oil Record Book, may aid the master of the ship in proving that his or her ship was not involved in an alleged pollution incident. The receipt or certificate should be kept together with the Oil Record Book.\.

\*Delete as appropriate.\.

\*Reference is made to Guidelines for the Application of Amendments to the List of Substances in Annex II of MARPOL 73/78 and the IBC Code with respect to Pollution Hazards approved by the Marine Environment Protection Committee of the Organization and issued under cover MEPC/Circ.266.\.

\*Reference is made to the International Maritime Dangerous Goods (IMDG) Code adopted by the Organization by resolution A.716(17) as it has been or may be amended by the Maritime Safety Committee.\.

\*Reference is made to the specific exemptions provided for in the International Maritime Dangerous Goods (IMDG) Code.\.

\*\*Reference to 'documents' in this Regulation does not preclude the use of electronic data processing (EDP) and electronic data interchange (EDI) transmission techniques as an aid to paper documentation.\.

\*Reference is made to the Composite List of Hazard Profiles, prepared by the IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), which is circulated annually by the Organization by means of BCH circulars to all IMO Member States.\.

\*\*The concentration of a substance which will, within the specified time (generally 96 hours), kill 50% of the exposed group of test organisms. LC50 is often specified in mg/ISI (parts per million (ppm)).\.

\*Reference is made to the Composite List of Hazard Profiles, prepared by the IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), which is circulated annually by the Organization by means of BCH circulars to all IMO Member States.\.