

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
62nd session  
Agenda item 24

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**REPORT OF THE MARINE ENVIRONMENT PROTECTION COMMITTEE  
ON ITS SIXTY-SECOND SESSION**

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## 1 INTRODUCTION

1.1 The sixty-second session of the Marine Environment Protection Committee was held at IMO Headquarters from 11 to 15 July 2011 under the chairmanship of Mr. Andreas Chrysostomou (Cyprus). The Vice-Chairman of the Committee, Captain Manuel Nogueira (Spain), was also present.

1.2 The session was attended by delegations from the following Members of IMO:

ALGERIA	KUWAIT
ANGOLA	LATVIA
ANTIGUA AND BARBUDA	LIBERIA
ARGENTINA	LIBYAN ARAB JAMAHIRIYA
AUSTRALIA	LITHUANIA
BAHAMAS	LUXEMBOURG
BANGLADESH	MALAYSIA
BELGIUM	MALTA
BELIZE	MARSHALL ISLANDS
BRAZIL	MEXICO
BULGARIA	MONACO
CAMEROON	MOROCCO
CANADA	NETHERLANDS
CHILE	NEW ZEALAND
CHINA	NIGERIA
COLOMBIA	NORWAY
COMOROS	OMAN
COOK ISLANDS	PANAMA
CROATIA	PAPUA NEW GUINEA
CUBA	PERU
CYPRUS	PHILIPPINES
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	POLAND
DENMARK	PORTUGAL
DOMINICAN REPUBLIC	QATAR
ECUADOR	REPUBLIC OF KOREA
EGYPT	ROMANIA
ESTONIA	RUSSIAN FEDERATION
FINLAND	SAINT KITTS AND NEVIS
FRANCE	SAINT VINCENT AND THE GRENADINES
GERMANY	SAUDI ARABIA
GHANA	SERBIA
GREECE	SINGAPORE
HONDURAS	SLOVENIA
HUNGARY	SOUTH AFRICA
ICELAND	SPAIN
INDIA	SRI LANKA
INDONESIA	SWEDEN
IRAN (ISLAMIC REPUBLIC OF)	SWITZERLAND
IRELAND	SYRIAN ARAB REPUBLIC
ISRAEL	THAILAND
ITALY	TURKEY
JAMAICA	TUVALU
JAPAN	UKRAINE
KIRIBATI	UNITED KINGDOM

UNITED STATES  
VANUATU

VENEZUELA (BOLIVARIAN  
REPUBLIC OF)

the following Associate Members of IMO:

HONG KONG, CHINA  
MACAO, CHINA

by representatives from the following UN Programmes, UN Specialized Agencies and other UN Entities:

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)  
WORLD METEOROLOGICAL ORGANIZATION (WMO)  
INTERNATIONAL LABOUR ORGANIZATION (ILO)  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)  
UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE  
(UNFCCC)  
UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)  
THE REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR  
THE MEDITERRANEAN SEA (REMPEC)

by observers from the following intergovernmental organizations:

EUROPEAN COMMISSION (EC)  
INTERNATIONAL OIL POLLUTION COMPENSATION FUNDS (IOPC FUNDS)  
MARITIME ORGANIZATION FOR WEST AND CENTRAL AFRICA (MOWCA)  
INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES)  
REGIONAL ORGANIZATION FOR THE PROTECTION OF THE MARINE  
ENVIRONMENT (ROPME)  
PACIFIC REGIONAL ENVIRONMENT PROGRAMME (SPREP)  
COMMISSION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF  
THE NORTH-EAST ATLANTIC (OSPAR COMMISSION)  
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)  
INTERNATIONAL CRIMINAL POLICE ORGANIZATION (INTERPOL)  
REGIONAL ORGANIZATION FOR THE CONSERVATION OF THE  
ENVIRONMENT OF THE RED SEA AND THE GULF OF ADEN (PERSGA)

and by observers from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)  
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)  
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)  
COMITÉ INTERNATIONAL RADIO-MARITIME (CIRM)  
INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)  
BIMCO  
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)  
EUROPEAN CHEMICAL INDUSTRY COUNCIL (CEFIC)  
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)  
INTERNATIONAL MARITIME PILOTS' ASSOCIATION (IMPA)  
FRIENDS OF THE EARTH INTERNATIONAL (FOEI)  
INTERNATIONAL COUNCIL OF MARINE INDUSTRY ASSOCIATIONS (ICOMIA)  
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)  
INTERNATIONAL ASSOCIATION OF OIL AND GAS PRODUCERS (OGP)  
COMMUNITY OF EUROPEAN SHIPYARDS' ASSOCIATIONS (CESA)

INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS  
(INTERTANKO)  
INTERNATIONAL GROUP OF P & I ASSOCIATIONS (P & I CLUBS)  
INTERNATIONAL TANKER OWNERS POLLUTION FEDERATION LIMITED  
(ITOPF)  
THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE (IUCN)  
ADVISORY COMMITTEE ON PROTECTION OF THE SEA (ACOPS)  
SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL OPERATORS  
LIMITED (SIGTTO)  
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)  
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS  
(INTERCARGO)  
WORLD WIDE FUND FOR NATURE (WWF)  
ASSOCIATION OF EUROPEAN MANUFACTURERS OF INTERNAL  
COMBUSTION ENGINES (EUROMOT)  
INTERNATIONAL PETROLEUM INDUSTRY ENVIRONMENTAL CONSERVATION  
ASSOCIATION (IPIECA)  
THE INSTITUTE OF MARINE ENGINEERING, SCIENCE AND TECHNOLOGY  
(IMarEST)  
INTERNATIONAL SHIP MANAGERS' ASSOCIATION (INTERMANAGER)  
INTERNATIONAL PARCEL TANKERS ASSOCIATION (IPTA)  
INTERNATIONAL SAILING FEDERATION (ISAF)  
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)  
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)  
INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)  
INTERNATIONAL BULK TERMINALS ASSOCIATION (IBTA)  
INTERNATIONAL CHRISTIAN MARITIME ASSOCIATION (ICMA)  
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)  
INTERFERRY  
INTERNATIONAL TOWING TANK CONFERENCE (ITTC)  
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION (IBIA)  
INTERNATIONAL ASSOCIATION OF MARITIME UNIVERSITIES (IAMU)  
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)  
INTERNATIONAL PAINT AND PRINTING INK COUNCIL (IPPIC)  
INTERNATIONAL FUND FOR ANIMAL WELFARE (IFAW)  
INTERNATIONAL SPILL CONTROL ORGANIZATION (ISCO)  
WORLD SHIPPING COUNCIL (WSC)  
NACE INTERNATIONAL  
THE NAUTICAL INSTITUTE (NI)  
PACIFIC ENVIRONMENT  
CLEAN SHIPPING COALITION (CSC)  
SUPERYACHT BUILDERS ASSOCIATION (SYBAss)

1.3 The Chairman of the Council, Mr. Jeffrey G. Lantz (United States), and the Chairman of the Sub-Committee on Bulk Liquids and Gases (BLG), Mr. Sveinung Oftedal (Norway), were also present.

#### **The Secretary-General's opening address**

1.4 The Secretary-General welcomed participants and delivered his opening address, which is reproduced, in full, in document MEPC 62/INF.41.



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## Chairman's remarks

1.5 The Chairman thanked the Secretary-General for his opening address and stated that the Secretary-General's advice and requests would be given every consideration in the deliberations of the Committee, in particular his appeal to all Members to work together to achieve consensus on the issue of energy efficiency for ships.

## Adoption of the agenda and provisional timetable

1.6 The Committee adopted the agenda as contained in document MEPC 62/1. The agenda, as adopted, with a list of documents considered under each agenda item, is set out in document MEPC 62/INF.42.

1.7 In considering the provisional timetable contained in annex 2 to document MEPC 62/1/1, the Chairman, with a view to conducting the work of the Committee in a more efficient manner, proposed an order of discussion in a revised provisional timetable, including a proposal to consider the documents submitted under item 6 in two parts:

Part I: referred to as "item 6.1", was to consider, separately, the draft amendments to MARPOL Annex IV (Designation of the Baltic Sea as a Special Area); Annex V (Revised Annex V); and Annex VI (Designation of the United States Caribbean Sea Emission Control Area and other related matters); and

Part II: referred to as "item 6.2", was to consider the draft amendments to MARPOL Annex VI (Mandatory technical and operational measures on energy efficiency for ships); and this "item 6.2" was to be considered after items 4 and 5.

1.8 The delegation of Brazil proposed in a statement that all documents related to greenhouse gas (GHG) issues under agenda item 6 should be considered by a working group under agenda item 5 which addresses reduction of GHG emissions from ships. As requested, the statement is set out in annex 1. A number of delegations expressed support for the proposal by the delegation of Brazil.

1.9 A number of other delegations expressed support for an intervention by the delegation of Norway, advocating that the documents which had been submitted under agenda item 6 were intended as proposed amendments to MARPOL Annex VI on energy efficiency of ships or comments thereon and, therefore, they should be considered under item 6.

1.10 The Chairman clarified that items 4 and 5 would be addressed prior to item 6 and that all technical and policy issues on GHG emissions from ships would therefore be addressed before actual consideration of the proposed amendments to MARPOL Annex VI on energy efficiency of ships, at which time a decision would be taken on the nature of the group to be established. He also clarified that, if any delegations wished their submission under item 6 to be considered under item 5, that could be accommodated when the latter agenda item was being considered.

1.11 The Committee, having noted the above clarifications, reached agreement on the revised provisional timetable proposed by the Chairman, bearing in mind that the timetable was subject to adjustments depending on the progress made each day.

## Credentials

1.12 The Committee noted that credentials of the delegations attending the session were in due and proper order.

## 2 HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

2.1 The Committee recalled that the "International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004" (BWM Convention) had been open for accession by any State since 31 May 2005 and noted that two more States (Islamic Republic of Iran and Malaysia) had acceded to the Convention since the last MEPC session, which brought the number of contracting Governments to 28, representing 26.37% of the world's merchant fleet tonnage. The Committee urged the other Member States to ratify the Convention at their earliest possible opportunity.

### REPORTS OF THE FIFTEENTH, SIXTEENTH AND SEVENTEENTH MEETINGS OF THE GESAMP-BWWG

2.2 The Committee noted that the fifteenth, sixteenth and seventeenth meetings of the GESAMP-BWWG were held from 13 to 17 December 2010, from 28 February to 4 March 2011 and from 2 to 6 May 2011, respectively, at IMO Headquarters, under the chairmanship of Mr. Jan Linders. During the three meetings, the GESAMP-BWWG had reviewed a total of 11 proposals for approval of ballast water management systems that make use of Active Substances, submitted by Germany, Greece, Japan (three proposals), Republic of Korea (four proposals) and Singapore (two proposals).

#### Basic Approval

2.3 The Committee, having considered the recommendations contained in annexes 5 and 6 of the "Report of the fifteenth meeting of the GESAMP-BWWG" (MEPC 62/2/11), the recommendations contained in annexes 4, 5, 6 and 7 of the "Report of the sixteenth meeting of the GESAMP-BWWG" (MEPC 62/2/12) as well as the recommendations contained in annex 7 of the "Report of the seventeenth meeting of the GESAMP-BWWG" (MEPC 62/2/18), agreed to grant Basic Approval to:

- .1 ERMA FIRST Ballast Water Management System, proposed by Greece in document MEPC 61/2/11;
- .2 BlueSeas Ballast Water Management System, proposed by Singapore in document MEPC 61/2/12;
- .3 Ballast Water Management System with PERACLEAN<sup>®</sup> OCEAN (SKY-SYSTEM<sup>®</sup>), proposed by Japan in document MEPC 62/2;
- .4 JFE BallastAce Ballast Water Management System that makes use of NEO-CHLOR MARINE<sup>™</sup>, proposed by Japan in document MEPC 62/2/1;
- .5 GEA Westfalia Separator BallastMaster Ballast Water Management System, proposed by Germany in document MEPC 62/2/2;
- .6 BlueWorld Ballast Water Management System, proposed by Singapore in document MEPC 62/2/3; and
- .7 Samsung Heavy Industries Co., Ltd. (SHI) Ballast Water Management System (Neo-Purimar<sup>™</sup>), proposed by the Republic of Korea in document MEPC 62/2/7.

2.4 The Committee then invited the Administrations of Germany, Greece, Japan, the Republic of Korea and Singapore to take into account all the recommendations made in the aforementioned reports of the GESAMP-BWWG during the further development of the systems.

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## Final Approval

2.5 The Committee, having considered the recommendations contained in annexes 5 and 6 of the report of the seventeenth meeting of the GESAMP-BWWG (MEPC 61/2/18) agreed to grant Final Approval to:

- .1 HHI Ballast Water Management System HiBallast (Filter Version), proposed by the Republic of Korea in document MEPC 62/2/5; and
- .2 Samsung Heavy Industries Co., Ltd. (SHI) Ballast Water Management System (Purimar™), proposed by the Republic of Korea in document MEPC 62/2/6.

2.6 Having noted that the initial application for Final Approval of Purimar™ Ballast Water Management System was submitted by Techwin Eco Co., Ltd., which was subsequently acquired by Samsung Heavy Industries Co., Ltd., the Committee agreed with the request of the Republic of Korea to reflect these changes in the report.

2.7 The Committee then invited the Administration of the Republic of Korea to verify that all the recommendations made in the report of the seventeenth meeting, annexes 5 and 6, are fully addressed prior to the issuance of Type Approval Certificates.

2.8 Having examined the recommendations contained in annex 4 of the report of the fifteenth meeting of the GESAMP-BWWG (MEPC 62/2/11) and annex 4 of the report of the seventeenth meeting of the GESAMP-BWWG (MEPC 62/2/18), the Committee did not agree to grant Final Approval to Special Pipe Hybrid Ballast Water Management System combined with PERACLEAN® Ocean (SPO-SYSTEM) proposed by Japan in document MEPC 61/2/10 and to AquaStar™ Ballast Water Management System proposed by the Republic of Korea in document MEPC 62/2/4 for the reasons given in annexes 4 of the above reports.

2.9 Following an intervention by the United States with regard to situations when incomplete information on proposals for approval of ballast water management systems was submitted to MEPC, the Committee instructed the Ballast Water Review Group (BWRG) to consider mechanisms for providing all relevant information in the non-confidential submissions related to such proposals.

## Future meetings of the GESAMP-BWWG

2.10 The Committee noted that 11 submissions for either Basic or Final Approval had been received by the deadline of 17 December 2010. Despite the efforts made by the GESAMP-BWWG and the Secretariat, due to the limited time between the above deadline and MEPC 62, the Group could only meet twice (GESAMP-BWWG 16 and GESAMP-BWWG 17) and was able to evaluate only the first eight proposals for approval in the chronological order of their submission. The Committee noted with appreciation that, with a view to facilitating the consideration of as many ballast water management systems as possible and in anticipation of a similar workload for the year 2012, the GESAMP-BWWG had agreed to hold an extraordinary meeting (GESAMP-BWWG 18), scheduled from 5 to 9 September 2011, to evaluate the remaining three proposals described in documents MEPC 62/2/8 (Republic of Korea), MEPC 62/2/9 (Japan) and MEPC 62/2/10 (Germany), the outcome of which would be reported to MEPC 63.

2.11 The Committee also noted that the next regular meeting of the GESAMP-BWWG (i.e. the nineteenth meeting) had been tentatively scheduled from 31 October to 4 November 2011 and invited Members to submit their proposals for approval

(application dossiers) and the non-confidential description of their ballast water management systems to MEPC 63, as soon as possible but not later than 2 September 2011.

2.12 The Committee further noted that, recognizing the possibility that more than four proposals may be submitted for review by the Group and approval by MEPC 63, the GESAMP-BWWG had expressed its availability to have an additional meeting, in December 2011/January 2012, to accommodate as many proposals as possible provided that all necessary conditions for organizing such a meeting are met (MEPC 62/2/18, section 3 of the report of the seventeenth meeting of the GESAMP-BWWG).

### **Other matters emanating from the GESAMP-BWWG meetings**

2.13 Having received the recommendations of the GESAMP-BWWG regarding the optimization of the evaluation of the proposals for approval, the Committee agreed to:

- .1 request the applicants and the submitting Administrations to provide the full data set, in accordance with the Methodology for information gathering and conduct of work of the GESAMP-BWWG, to avoid difficult and time consuming communication with the applicants during the meeting of the Group;
- .2 request the applicants/Administrations to make available publicly, the data related to safety and environmental protection, including physical/chemical properties, environmental fate and toxicity in accordance with the provision contained in paragraph 8.1.1 of Procedure (G9) regarding the information which should not be considered confidential; and
- .3 encourage the applicants/Administrations to provide complete electronic versions (CD-ROM or pen drive) of the entire application dossier to facilitate enhanced efficiency of the evaluation process.

2.14 The Committee recalled that MEPC 61 agreed to extend the "trial period" for the face-to-face meetings between the GESAMP-BWWG and Administrations/applicants, which were to take place at least during two sessions of the GESAMP-BWWG, with a view to gaining sufficient experience. This extension of the trial was to include an entire MEPC intersessional period to ensure that face-to-face meetings are available to all applicants in that period.

2.15 The Committee noted that, at the request of the Administration of Japan, a meeting with the representatives of the manufacturer of Special Pipe Hybrid Ballast Water Management System combined with PERACLEAN<sup>®</sup> Ocean (SPO-SYSTEM) was organized on 15 December 2010. Having examined the conclusions of the Group, the Committee noted that the discussions largely reiterated the information already provided by e-mail in the written response to the Group's questions and concurred with the Group's view that the already existing system of written communication with the applicants by e-mail, which has been tested during the last five years, is more effective, ensures accurate record keeping, allows for detailed and documented response from the applicants and avoids unnecessary delays/disruptions in the work of the Group.

2.16 Following an intervention by the delegation of Germany, which pointed out that the trial period was supposed to cover two face-to-face meetings during the sessions of the GESAMP-BWWG, the Committee agreed to extend the trial period.

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**ORGANIZATIONAL ARRANGEMENTS RELATED TO THE EVALUATION AND APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS**

2.17 The Committee recalled that MEPC 60 agreed with the recommendation of the GESAMP-BWWG to hold a third stocktaking workshop to continue the development of adequate "tools" to increase the effectiveness and efficiency of its work and noted that the workshop was held at IMO Headquarters, London, from 4 to 6 April 2011, under the chairmanship of Mr. Jan Linders.

2.18 The Committee noted the outcome of the Third Stocktaking Workshop contained in document MEPC 62/2/14 (Secretariat) and endorsed the proposal of the Group to conduct yearly stocktaking meetings without the pressure of having to review the proposals for approval of ballast water management systems.

2.19 The Committee noted with appreciation the information provided in document MEPC 62/INF.19 (Germany) regarding a proposal for a harmonized Emission Scenario Document (ESD) on ballast water discharge.

2.20 The Committee noted the information contained in documents MEPC 61/INF.5 (Secretariat) and MEPC 61/2/20 (CEFIC), deferred to this session by MEPC 61, as well as MEPC 62/2/20 (CEFIC) and MEPC 62/INF.40 (Secretariat) updating the information in the former documents relating to administrative and financial aspects of the GESAMP-BWWG activities and proposals designed to increase the efficiency of the Group and promote the ratification, entry into force, implementation and enforcement of the BWM Convention.

2.21 In this regard, the Committee noted that the proposals related to the Group's efficiency had been superseded by the information contained in document MEPC 62/INF.40 and concluded by recommending that the Secretary-General establishes a trust fund using US\$300,000 from the unspent balance of funds deriving from the GESAMP-BWWG fee income, to provide technical assistance to developing countries on the BWM Convention for the purposes indicated above. The Committee also noted that the Secretariat would, in accordance with its usual practices, communicate with relevant Administrations seeking their concurrence with the establishment of the aforementioned trust fund.

2.22 Noting that, in accordance with the IMO Convention, matters related to the Organization's finances were for the Council to consider, the Chairman closed this subject to future discussion, with the Committee considering the related technical co-operation issues under the appropriate agenda item.

**IMPLEMENTATION OF THE BWM CONVENTION**

2.23 Having considered document MEPC 62/2/13 (Belgium and the Netherlands) providing information regarding hopper dredgers and the interpretation of the co-sponsors concerning the water present in the hopper area, the Committee concurred with the conclusions contained in this document and agreed that water present in the hopper area is not considered ballast water and instructed the BWRG to prepare a draft BWM circular to reflect this decision.

2.24 Following consideration of document MEPC 62/2/15 (WWF, IUCN and CSC) expressing concern with regard to the fact that the rate of bioinvasions continues to increase at alarming rates and urging responsible flag States to adhere to their international commitments to both protect the planet and to ensure a cleaner shipping industry, the Committee reiterated the invitation to flag States – indeed all Member States – that have not yet ratified the BWM Convention to do so at their earliest convenience.

2.25 Having considered document MEPC 62/2/16 (IACS) regarding the application schedule of the D-2 standard for ships described in regulation B-3.4 of the BWM Convention and the comments made by the delegation of the United States supported by Germany, the Committee instructed the BWRG to consider the interpretation on the application schedule of the D-2 standard provided by IACS and agree on the draft text to expand on circular BWM.2/Circ.29 to include ships described in paragraph 4 of regulation B-3 of the BWM Convention.

2.26 The Committee, having considered document MEPC 62/2/19 (IACS) proposing a correction to the Guidelines on design and construction to facilitate sediment control on ships (G12) and the comments provided by ICS, instructed the BWRG to review the corrections proposed by IACS and advise on the necessary changes.

2.27 The Committee noted with appreciation the information contained in document MEPC 62/INF.31 (IMarEST) on logistics of compliance assessment and enforcement of the Ballast Water Management Convention.

#### **REVIEW OF THE STATUS OF BALLAST WATER TREATMENT TECHNOLOGIES FOCUSING ON LARGER SHIPS**

2.28 The Committee recalled that, in anticipation of the possible entry into force of the BWM Convention in 2012, MEPC 61 agreed that a new review of ballast water treatment technologies, focused on larger ships (with ballast water capacity of 5,000 cubic metres or more, in particular those with higher flow rate) would be necessary and decided to re-establish the BWRG at this session.

2.29 Following consideration of document MEPC 62/2/17 (ICS) regarding the supply of ballast water management systems to new and existing ships, the Committee agreed to:

- .1 urge the ballast water management systems manufacturers to provide solutions for suitable type-approved systems to be installed on larger ships; and
- .2 request the Review Group to discuss the challenges related to specialist ship types described in document MEPC 61/2/13 (the Netherlands) and advise the Committee accordingly.

2.30 Having considered document MEPC 62/2/21 (United Kingdom) commenting on document MEPC 62/2/17 and providing an update on available ballast water technologies, the Committee agreed to refer this document to the BWRG for detailed consideration when conducting its review.

2.31 The Committee noted with appreciation the information regarding type approved ballast water management systems contained in the following documents:

- .1 MEPC 62/INF.14 (Norway) on the Type Approval of the PureBallast 2.0 and PureBallast 2.0 Ex Ballast Water Management Systems;
- .2 MEPC 62/INF.15 (Norway) on the Type Approval of the OceanSaver<sup>®</sup> Ballast Water Management System;
- .3 MEPC 62/INF.18 (South Africa) on the Type Approval of the Resource Ballast Technologies System (Cavitation combined with ozone and sodium hypochlorite treatment);

- .4 MEPC 62/INF.25 (Japan) on the Type Approval of the JFE Ballast Water Management System (JFE BallastAce);
- .5 MEPC 62/INF.28 (China) on the Type Approval of the Blue Ocean Shield Ballast Water Management System;
- .6 MEPC 62/INF.29 (China) on the Type Approval of the BalClor™ Ballast Water Management System; and
- .7 MEPC 62/INF.30 (China) on the Type Approval of the BSKY™ Ballast Water Management System,

and instructed the Review Group to take it into consideration when conducting its review.

2.32 Following an intervention by ICS with regard to changes made to already approved ballast water management systems and their implications on implementation of the Procedure (G9), the Committee agreed to instruct the BWRG to review the information provided in document MEPC 62/INF.15 (Norway) and evaluate possible implications.

#### **ESTABLISHMENT OF THE BALLAST WATER REVIEW GROUP**

2.33 The Committee agreed to establish the Ballast Water Review Group with the following terms of reference:

"Taking into consideration comments made in plenary, the Ballast Water Review Group is instructed to:

- .1 prepare a draft BWM circular to reflect the decision of the Committee with regard to the water present in the hopper area of hopper dredgers;
- .2 consider the interpretation on the application schedule of the D-2 standard provided by IACS in document MEPC 62/2/16 and agree on the draft text to expand on circular BWM.2/Circ.29 to include ships described in paragraph 4 of regulation B-3;
- .3 consider the corrections proposed by IACS in document MEPC 62/2/19 and the comments by ICS and advise the Committee on the necessary changes;
- .4 discuss the challenges related to implementation of the BWM Convention to specialist ship types and advise the Committee accordingly;
- .5 consider the mechanisms for providing all relevant information in the non-confidential documents relating to proposals for approval of BWMS;
- .6 consider the information related to the development of ballast water treatment technologies taking into account the information contained in documents MEPC 62/2/17 (ICS), MEPC 62/2/21 (United Kingdom), MEPC 62/INF.14 and MEPC 62/INF.15 (Norway), MEPC 62/INF.18 (South Africa), MEPC 62/INF.25 (Japan) and MEPC 62/INF.28, MEPC 62/INF.29 and MEPC 62/INF.30 (China) and identify the current status of these technologies;

- .7 review the information provided in document MEPC 62/INF.15 (Norway) and evaluate the further implications for the implementation of the Procedure (G9);
- .8 determine the availability of ballast water treatment technologies for large ships and advise the Committee accordingly; and
- .9 submit a written report on the review conducted, including its findings and recommendations, to plenary on Thursday, 14 July 2011."

#### **CONSIDERATION OF THE REPORT OF THE BALLAST WATER REVIEW GROUP**

2.34 Upon receipt of the report of the Ballast Water Review Group (MEPC 62/WP.8), the Committee approved the report in general and took action as follows (paragraph numbers are those of document MEPC 62/WP.8):

- .1 approved a draft circular, which clarifies that the provisions of the BWM Convention are not applicable to the water in the hopper area of hopper dredgers, and instructed the Secretariat to disseminate this information as BWM/Circ.32 (paragraph 4 and annex);
- .2 instructed the Secretariat to expand on circular BWM.2/Circ.29 (to be disseminated as BWM.2/Circ.29/Rev.1) by adding a new paragraph, as indicated in paragraph 6 of document MEPC 62/WP.8 (paragraph 6);
- .3 agreed with the changes to Guidelines (G12) proposed by the BWRG and instructed the Secretariat to replace the old text and to prepare a new draft resolution for consideration and adoption by MEPC 63 (paragraph 8);
- .4 noted the information provided by the Netherlands and the Marshall Islands with regard to the implementation of the BWM Convention to specialist ship types and reiterated the invitation to Members and observers to propose practical solutions to the challenges identified at MEPC 61 (paragraph 10);
- .5 urged proponents seeking approval of BWMS that use Active Substances to thoroughly observe the provisions of paragraph 8.1.1 of Procedure (G9) and advised them that failure to provide the non-confidential information could result in Member States having insufficient data to approve the proposals when requested by the Committee (paragraphs 11 and 12);
- .6 noted the recommendation of the BWRG that INF documents be used in conjunction with proposals for approval to ensure that all safety and environmental protection data is made available (paragraph 13);
- .7 encouraged Member States to make use of the provision contained in paragraph 8.1.2.6 of Procedure (G9), especially with regard to incomplete or missing data in the non-confidential information regarding proposals for approval of ballast water management systems that make use of Active Substances, to assist the proponents in this respect (paragraph 14);
- .8 noted that, despite some difficulties, ballast water treatment technologies are available for certain types of vessels with high capacity and high flow rate and are currently being fitted on board some ships (paragraph 20);



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- .9 urged Member States and industry representatives to provide criteria and data to MEPC 63 in order to allow an informed and focused review of the availability of the ballast water management technology at a later stage (paragraph 21);
  - .10 agreed that a review be conducted once the Convention achieves its ratification requirements and before it enters into force (paragraph 22);
  - .11 noted that in the specific case described in document MEPC 62/INF.15, Procedure (G9) was duly observed (paragraph 24); and
  - .12 agreed to re-establish the Review Group at MEPC 63 in accordance with the provisions of regulation D-5.1 of the BWM Convention (paragraph 25).

2.35 Following an intervention by the delegation of the United States, the Committee agreed with the editorial changes proposed for the new paragraph to expand on circular BWM.2/Circ.29 mentioned in subparagraph 2.34.2 above.

2.36 The Committee thanked the Chairman and the members of the BWRG for their hard work.

### **3 RECYCLING OF SHIPS**

3.1 The Committee noted that the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) had been signed subject to ratification by France, the Netherlands, Italy, Turkey and Saint Kitts and Nevis. The Committee encouraged countries to ratify the Convention.

3.2 The Committee recalled that, since the adoption of the Hong Kong Convention, MEPC 59 had adopted the "Guidelines for the development of the Inventory of Hazardous Materials". Thereafter, MEPC 60 had agreed that the guidelines on ship recycling facilities, on the Ship Recycling Plan, and on the authorization of the ship recycling facilities should be developed in parallel, in view of the close interrelationships between them. MEPC 60, MEPC 61 and the Correspondence Group on Ship Recycling Guidelines, that was established by both sessions of the Committee, had made progress in the development of the three guidelines, with a view to their adoption at MEPC 62.

#### **Planning of the work**

3.3 The Committee had for its consideration 15 documents submitted under the item, including two information documents, covering the following issues:

- .1 There were five submissions addressing the three guidelines currently under development. Three of these submissions, forming the report of the Correspondence Group, were submitted by the Group's coordinator, Japan (MEPC 62/3, MEPC 62/3/1, MEPC 62/3/2). The remaining two submissions proposed amendments to the draft text of the "Guidelines for safe and environmentally sound ship recycling". In its submission (MEPC 62/3/4), France proposed text to ensure that the list of Hazardous Materials, to be addressed in the Ship Recycling Facility Plan, was more closely aligned to the text used in the "Guidelines for the development of the Inventory of Hazardous Materials". Also, France and IACS, in their joint submission (MEPC 62/3/11), proposed specific amendments to the section on safe-for-entry procedures, to take into account the work completed by

DSC 15, which was considered by MSC 89 which, in turn, approved a draft Assembly resolution on "Adoption of the Revised Recommendations for entering enclosed spaces aboard ships" for submission to the twenty-seventh session of the Assembly for adoption.

- .2 There were six submissions proposing amendments to the "Guidelines for the development of the Inventory of Hazardous Materials", adopted by resolution MEPC.179(59). China (MEPC 62/3/6) proposed three additional entries of potentially hazardous goods in Table C of appendix 1, and two editorial corrections in appendix 5 of the guidelines. IACS (MEPC 62/3/8) and China (MEPC 62/3/12) proposed that, as had been agreed at MEPC 61, the Committee should consider the definition of uniform testing methods within the guidelines, so that test results are comparable internationally. Both submissions proposed specific text to introduce definitive testing. China (MEPC 62/3/7) and ICS and industry co-sponsors (MEPC 62/3/10) recalled the pressing need for the development of threshold values and exemptions applicable to the materials that are to be listed in Inventories of Hazardous Materials. This was of specific relevance to sampling procedures, to the Ship Recycling Plan, and to the Convention's implementation and control procedures. China, in its submission, proposed specific threshold levels for certain hazardous materials, while ICS and industry co-sponsors provided lists of threshold values based on a provisional analysis and suggested the need for further substantive and expert work. Finally, IACS (MEPC 62/3/9) highlighted what it considered to be an unintentional drafting error in the guidelines, which could create serious consequences when compiling inventories, and proposed a simple textual amendment to address the problem. The Committee noted that many shipowners were already providing their ships with inventories of hazardous materials and that the early and voluntary implementation of the "Guidelines for the development of the Inventory of Hazardous Materials" had provided valuable experience, as was indicated by the six submissions to this session. The Committee was therefore invited to reflect the experience gained so far into appropriate amendments to the guidelines.
- .3 There were two submissions on other matters. The Republic of Korea (MEPC 62/3/3) provided an analysis of the elements to be included in the future development of a guidance document on the delegation by Competent Authorities to recognized organizations for the authorization of ship recycling facilities. That information would be particularly useful when the Committee would commence the development of the guidance document. The Committee also noted that the FSI Sub-Committee was developing a Code for recognized organizations which would provide a consolidated instrument (including resolutions A.739(18) and A.789(19)) containing criteria for assessing and authorizing recognized organizations. The draft RO Code should be completed at FSI 20 and submitted to MSC 90 and MEPC 64. The second submission was by China (MEPC 62/3/5) who had identified that the text of the Hong Kong Convention required a definition for the term "similar stage of construction", and also that an inconsistency in the text of Appendix 5 needed to be corrected. As the Convention could not be amended until it entered into force, the Committee thanked China and suggested that its proposals would be discussed at the appropriate time in the future. For the interim period, it was suggested that China could consider proposing to the

Working Group on Guidelines for Ship Recycling that the missing definition could be addressed as an amendment to the Inventory Guidelines, while the identified inconsistency in Appendix 5 of the Convention could possibly be addressed in the Authorization Guidelines.

- .4 Finally, there were two information documents. The first one, by the Secretariat (MEPC 62/INF.13), was intended to assist the Committee and other stakeholders to reach a better understanding of the conditions for the Convention's entry into force. The document presented the compilation of published ship recycling volume data that will be used by the Depositary for determining the entry-into-force condition on ship recycling volume, in accordance with resolution MEPC.178(59). The second document, by the World Bank (MEPC 62/INF.27), invited the Committee to note its report "Ship Breaking and Recycling Industry in Bangladesh and Pakistan", which examined the productivity, competitiveness, economics, and environmental performance of the ship recycling industry in Bangladesh and Pakistan. The report explained that both countries faced considerable infrastructural needs and concerted efforts were required to achieve adequate institutional capacity and enforcement. The World Bank had concluded that achieving compliance with the Hong Kong Convention would be possible through a strong public-private partnership and with adequate technical and investment assistance.

3.4 On a proposal by the Chairman, the Committee agreed to present and discuss in plenary only the reports of the Correspondence Group, while the remaining documents would be introduced in and considered by the Working Group.

### **Development of the guidelines**

3.5 In considering the reports of the intersessional Correspondence Group (MEPC 62/3, MEPC 62/3/1 and MEPC 62/3/2), the Committee thanked Japan for its continuing contribution as coordinator of the Group and all the members of the Group for their excellent work. Furthermore, the Committee noted that some of the Group's work took place in the aftermath of Japan's devastating earthquake and tsunami of March 2011, and expressed its sincere appreciation to the Chairman of the Group and his colleagues who persisted in completing their task in very difficult circumstances.

3.6 The Committee agreed to establish a working group to consider the reports of the intersessional Correspondence Group as a basis for the further development of the "Guidelines for safe and environmentally sound ship recycling", the "Guidelines for the development of the Ship Recycling Plan" and the "Guidelines on the authorization of the ship recycling facilities". The Working Group was requested to ensure that the guidelines would: (1) be user-friendly; (2) not be overly complicated; (3) create no overlaps or conflicts with other guidelines or the Hong Kong Convention; and (4) not go beyond the scope of the Hong Kong Convention. The Committee also agreed to instruct the Working Group to develop draft amendments to the "Guidelines for the development of the Inventory of Hazardous Materials", as adopted by resolution MEPC.179(59), with a view to their adoption at MEPC 62, taking into account the comments and proposals in the submissions to this session.

### **Establishment of the Working Group on Guidelines for Ship Recycling**

3.7 Having considered the above issues, the Committee established the Working Group on Guidelines for Ship Recycling under the chairmanship of Dr. Claude Wohrer (France) with the following Terms of Reference:

"Taking into account comments, proposals and decisions made in plenary, the Working Group on Guidelines for Ship Recycling is instructed to:

- .1 further develop the draft "Guidelines for safe and environmentally sound ship recycling" with a view to their adoption at MEPC 62, using as a basis the text contained in document MEPC 62/3 and taking into account the comments and proposals in documents MEPC 62/3/4 and MEPC 62/3/11;
- .2 further develop the draft "Guidelines for the development of the Ship Recycling Plan" with a view to their adoption at MEPC 62, using as a basis the text contained in document MEPC 62/3/1;
- .3 further develop the draft "Guidelines for the authorization of Ship Recycling Facilities" with a view to their adoption at MEPC 62, using as a basis the text contained in document MEPC 62/3/2;
- .4 develop draft amendments to the "Guidelines for the development of the Inventory of Hazardous Materials", as adopted by resolution MEPC.179(59), with a view to their adoption at MEPC 62, taking into account the comments and proposals in documents MEPC 62/3/6, MEPC 62/3/7, MEPC 62/3/8, MEPC 62/3/9, MEPC 62/3/10 and MEPC 62/3/12;
- .5 consider and recommend if an intersessional correspondence group on ship recycling guidelines should be established; and, if so, develop draft terms of reference for the group; and
- .6 submit a written report to plenary on Thursday, 14 July 2011."

### **Report of the Working Group on Guidelines for Ship Recycling**

3.8 The Committee considered and approved the report of the Working Group (MEPC 62/WP.9) in general and, in particular (paragraph and annex numbers are those of document MEPC 62/WP.9):

- .1 noted the progress made by the Group on the development of the draft "Guidelines for safe and environmentally sound ship recycling" (paragraphs 4 to 9 and annex 1);
- .2 adopted the "2011 Guidelines for the development of the Ship Recycling Plan" by resolution MEPC.196(62), as set out in annex 2, as the guidelines had been finalized and agreed by the Group (paragraphs 10 to 17), and revoked MEPC/Circ.419, of 12 November 2004, on "Guidelines for the development of the Ship Recycling Plan", as their contents have been superseded by the 2011 guidelines;
- .3 noted the progress made by the Group on the development of the draft "Guidelines for the authorization of Ship Recycling Facilities" (paragraphs 18 to 24 and annex 3);
- .4 adopted the "2011 Guidelines for the development of the Inventory of Hazardous Materials" by resolution MEPC.197(62), as set out in annex 3, as the guidelines had been finalized and agreed by the Group (paragraphs 25 to 28); and

- .5 agreed to the re-establishment of the intersessional Correspondence Group on Ship Recycling Guidelines, under the coordination of Japan<sup>1</sup> and approved the terms of reference for the Group as follows:

"On the basis of the outcome of MEPC 62 and the report of the Working Group (MEPC 62/WP.9), the Correspondence Group on Ship Recycling Guidelines is instructed to:

- .1 further develop and, if possible, finalize the draft text of the "Guidelines for safe and environmentally sound ship recycling", based on the text contained in annex 1 to document MEPC 62/WP.9, taking into account documents MEPC 62/3/4 and MEPC 62/3/11, with a view to their adoption at MEPC 63;
- .2 further develop and, if possible, finalize the draft text of the "Guidelines for the authorization of Ship Recycling Facilities", based on the text contained in annex 3 to document MEPC 62/WP.9, with a view to their adoption at MEPC 63;
- .3 if possible, commence the development of the draft text of the "Guidelines for survey and certification under the Hong Kong Convention", taking into account documents MEPC 55/3/6, MEPC 56/3/3, MEPC 56/3/7 and MEPC 56/3/11;
- .4 if possible, commence the development of the draft text of the "Guidelines for inspection of ships under the Hong Kong Convention"; and
- .5 report the outcome of its deliberations to MEPC 63."

3.9 The delegation of France stated that, whilst welcoming the adoption of the two guidelines, it would have preferred to have adopted the "Guidelines for the development of the Ship Recycling Plan" as interim guidelines, because they are linked to the requirements of the draft "Guidelines for safe and environmentally sound ship recycling", and of the draft "Guidelines for the authorization of Ship Recycling Facilities", neither of which were ready for adoption at the sixty-second session, and also because there had been no experience from the implementation of the "Guidelines for the development of the Ship Recycling Plan". However, the delegation of France acknowledged that the issue had been discussed by the Working Group which had agreed not to recommend the adoption of interim guidelines, in order to avoid confusion to stakeholders and also because the guidelines would, in any case, remain under review.

3.10 The Committee thanked the Chairman and the members of the Working Group for their hard work.

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## 4 PREVENTION OF AIR POLLUTION FROM SHIPS

### Order of discussions

4.1 The Committee noted that, under this agenda item, relevant parts of document MEPC 62/11/1 on the outcome of FSI 19 and document MEPC 62/11/2 on the outcome of BLG 15 should be considered. Three documents under agenda item 7 concerning MARPOL Annex VI (MEPC 62/7/6, MEPC 62/7/7 and MEPC 62/7/8) and two documents under agenda item 11 concerning SCR Guidelines (MEPC 62/11/5 and MEPC 62/11/8) should also be considered under this agenda item.

4.2 To facilitate consideration of the item, the Committee agreed to the following order of discussion and grouping of documents:

- .1 Outcome of BLG 15:  
Relevant parts of MEPC 62/11/2 (paragraphs 2.18 to 2.24) by the Secretariat;  
  
Fuel oil quality:  
MEPC 62/4/4 by Norway and INTERTANKO,  
MEPC 62/4/11 and MEPC 62/4/12 by Norway;  
  
Emissions of Black Carbon from international shipping:  
MEPC 62/4/3 by UNECE,  
MEPC 62/4/16 by CSC, FOEI, Pacific Environment and WWF,  
MEPC 62/4/10 by Norway,  
MEPC 62/4/18 by Republic of Korea;  
  
Review of the status of the technological developments to implement Tier III NO<sub>x</sub> standards (regulation 13.10 of MARPOL Annex VI):  
MEPC 62/4/9 by the Secretariat,  
MEPC 62/4/2 by ICOMIA,  
MEPC 62/4/20 by the United States;  
  
SCR guidelines and possible amendments to the NO<sub>x</sub> Technical Code 2008:  
MEPC 62/4/13 by the United States and Ireland,  
MEPC 62/4/14 and MEPC 62/4/15 by China,  
MEPC 62/11/5 by Germany,  
MEPC 62/11/8 by IACS;
- .2 Outcome of FSI 19:  
Relevant parts of MEPC 62/11/1 (paragraphs 2.8 and 2.9) by the Secretariat;
- .3 Provisions for shipboard incineration under regulation 16 of MARPOL Annex VI:  
MEPC 62/7/7 by the Russian Federation,  
MEPC 62/7/6 by IACS;
- .4 Notifications under MARPOL Annex VI:  
MEPC 62/4/1 by the Secretariat,  
MEPC 62/7/8 by IACS;
- .5 Report of the Correspondence Group on Assessment of Availability of Fuel Oil under MARPOL Annex VI:  
MEPC 62/4/5 and MEPC 62/INF.9 by the United States,  
MEPC 62/4/21 by ICS;

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- .6 Provisions for sulphur oxides and particulate matter under regulation 14 of MARPOL Annex VI:  
MEPC 62/4/17 by ICS,  
MEPC 62/4/20 by the United States,  
MEPC 62/4 by the Secretariat; and
- .7 Other air pollution issues.

### **Outcome of BLG 15**

4.3 The Committee recalled that the BLG Sub-Committee was instructed to update and develop guidelines and to consider the need for further guidance on several issues relating to the implementation of MARPOL Annex VI and the NO<sub>x</sub> Technical Code 2008.

#### ***Fuel oil quality***

4.4 The Committee recalled also that MEPC 61 considered the revised specification of marine fuels ISO 8217:2010, taking into account issues regarding fuel oil characteristics and parameters addressing air quality, ship safety, engine performance and crew health. MEPC 61 agreed that relevant documents, as well as comments raised, should be further considered in detail by BLG 15.

4.5 The Committee noted that BLG 15 considered these issues in detail and concluded that more information and data were required to enable appropriate consideration on matters related to the revised specification of marine fuels (ISO 8217:2010), the limit of hydrogen sulphide (H<sub>2</sub>S), as well as the need and design of a possible new mechanism for quality control of marine fuels.

4.6 The Committee considered document MEPC 62/4/4 (Norway and INTERTANKO) providing follow-up information from proposals to BLG 15 (BLG 15/11/4) on the impact of bunker quality problems reported by ships and identifying, as examples, some such instances during recent years.

4.7 The Committee considered document MEPC 62/4/11 (Norway) proposing that the Bunker Delivery Note (BDN) should be expanded to include additional fuel parameters that ISO, in document MEPC 59/4/3, considered relevant to seafarers' health, safety of the ship and air emissions.

4.8 The Committee considered document MEPC 62/4/12 (Norway) proposing that the 2009 Guidelines for sampling of fuel oil for determination of compliance with the revised MARPOL Annex VI (resolution MEPC.182(59)) should be amended to include guidelines for sampling of fuel oil from tanks, due to the fact that, in some port State controls, fuel samples are taken directly from the ship's tanks in order to verify the actual fuel used on board the ship. The document suggested that the verification of a tank sample should always be accompanied by a verification test of the MARPOL sample to confirm that the fuel delivered and the fuel in the tanks are of the same origin/source.

4.9 The Committee exchanged views on the fuel oil specification and the need for additional quality control prior to delivery to ships. The majority of delegations was of the view that there was no need to introduce any additional parameters into the mandatory Bunker Delivery Note, as this would be a duplication of effort. The delegation of Norway made three interventions during the debate related to fuel oil quality. As requested, the interventions are set out in annex 4.

4.10 The Committee noted that there was a need to establish separate procedures for sampling fuel oil being used on board ships to verify compliance with the provisions of regulation 14 of MARPOL Annex VI.

4.11 The Marshall Islands expressed its objection to specify regulation 14 in the Terms of Reference to the BLG Sub-Committee in this regard, based on the understanding that direct sampling from fuel oil tanks is not specified as a means to determine compliance with MARPOL Annex VI.

4.12 The Committee agreed to develop an appropriate procedure for sampling of fuel oil for port State control and flag State inspection. However, it did not agree to the proposal for a verification test of a tank sample to be accompanied by a verification test of the MARPOL sample.

4.13 The Committee noted that there remained concerns related to fuel oil sampling which the Committee needed to address, and agreed that the matter should be re-considered by the BLG Sub-Committee. It instructed the Working Group to develop draft Terms of Reference for BLG with 2012 as the target completion year for this work.

### ***Emissions of Black Carbon from international shipping***

4.14 The Committee recalled that, since MEPC 58, it had considered documents providing summaries and analyses of various approaches to reduce emissions of climate forcing agents from international shipping, which included information on the impact of Black Carbon.

4.15 The Committee recalled also that MEPC 60 held a debate on whether separate actions were needed to reduce shipping emissions of Black Carbon in the Arctic region and how this should relate to the general work on prevention of air pollution from ships under MARPOL Annex VI and the Organization's work on energy efficiency of ships.

4.16 The Committee recalled further that MEPC 61 agreed to invite interested delegations and observers to submit concrete proposals with specific measures to BLG 15.

4.17 The Committee noted that BLG 15, having considered relevant documents, requested the Committee to provide clearer instructions on how the matter of Black Carbon should be addressed.

4.18 The Committee noted also that several documents had been submitted for its consideration on emissions of Black Carbon from international shipping and, specifically, proposals for the development of a work plan to address the issue.

4.19 A number of delegations considered that there was a need for further scientific information before considering a work plan for this issue, and that the compelling need for the Organization to address the issue had not been established. A number of other delegations stated that the Committee had already agreed to address the reduction of emissions of Black Carbon and that the work plan proposed by Norway in document MEPC 62/4/10 was an appropriate way forward. In supporting the work plan, some delegations felt it should be limited to considering the impact of Black Carbon emissions in the Arctic. Also, a number of delegations reasoned that it was premature to consider the development of regulatory measures.

4.20 The Committee agreed to a work plan for the BLG Sub-Committee for consideration of the impact on the Arctic of emissions of Black Carbon from international shipping as follows:



- .1 develop a definition for Black Carbon emissions from international shipping;
- .2 consider measurement methods for Black Carbon and identify the most appropriate method for measuring Black Carbon emissions from international shipping;
- .3 investigate appropriate control measures to reduce the impact of Black Carbon emissions from international shipping; and
- .4 submit a final report to MEPC 65, where the Committee should agree on the appropriate action(s).

4.21 The Committee noted the additional information provided in documents MEPC 62/4/3 by UNECE, MEPC 62/4/16 by CSC, FOEI, Pacific Environment and WWF, MEPC 62/4/18 by the Republic of Korea, MEPC 62/INF.32 and MEPC 62/INF.33 by Clean Shipping Coalition and instructed the BLG Sub-Committee to consider them further, as necessary, under the terms of the agreed work plan.

***Review of the status of the technological developments to implement the Tier III NO<sub>x</sub> standards (MARPOL Annex VI, regulation 13.10)***

4.22 The Committee recalled that BLG 15 requested the Secretariat to prepare a document outlining the requirements of the Tier III NO<sub>x</sub> review (BLG 15/19, paragraph 11.54) and submit the document to this session of the Committee in order to progress the review process.

4.23 The Committee considered the draft Terms of Reference as prepared by the Secretariat in document MEPC 62/4/9, comments on the same in document MEPC 62/4/20 by the United States and document MEPC 62/4/2 by ICOMIA.

4.24 The Committee agreed to establish a correspondence group under the coordination of the United States<sup>2</sup>, rather than an expert group, to review the status of the technological developments to implement the Tier III NO<sub>x</sub> emissions standard with the following Terms of Reference:

"1 The Correspondence Group (NO<sub>x</sub>-CG) is instructed to review the status of technological developments to implement the Tier III NO<sub>x</sub> emissions standards as required under regulation 13.10 of MARPOL Annex VI and shall:

- .1 consider the matter, including deliberation of what information and data are pertinent for the review and how that information and data should be collated and analysed;
- .2 using this data and any other information, consider the status of technological developments to implement the standards set forth in regulation 13.5.1.1 of MARPOL Annex VI, with a view to reporting on the following:

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<sup>2</sup>

**Coordinator:**

Mr. Michael J. Samulski  
United States Environmental Protection Agency  
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- .1 range of technologies (engine fitting, material, appliance, apparatus, other procedures, alternative fuels or compliance methods) that may be used to comply with the Tier III NO<sub>x</sub> standards;
  - .2 the current use of these technologies on marine diesel vessels with a view towards characterizing the introduction and demonstration of these technologies in real world applications;
  - .3 progress of engine and after-treatment manufacturers towards developing such technology and expectations for bringing Tier III NO<sub>x</sub> technologies fully to market by 2016;
  - .4 identification of any sub-sets of marine diesel engines where there will not be technologies available to comply with the Tier III standards;
  - .5 where relevant, the global availability of consumable products used by a certain technology to reduce emissions to the required standard in Tier III, including supply chain issues, e.g., restrictions on import, export and sale;
  - .6 where relevant, the storage on board ship of consumable products used by a certain technology to reduce emissions to the required standard in Tier III, including handling as well as crew health and safety issues;
- .3 recommend whether the effective date in regulation 13.5.1.1 of MARPOL Annex VI should be retained or, if adjustment is needed, reasoning behind that adjustment; and
  - .4 provide an interim report to MEPC 64 and submit a final report to MEPC 65 in 2013."

### ***SCR guidelines and possible amendments to the NO<sub>x</sub> Technical Code 2008***

4.25 The Committee recalled that BLG 15 agreed on the need to amend the NO<sub>x</sub> Technical Code 2008 (NTC 2008) to provide more flexibility in the survey and certification process of large marine diesel engines fitted with selective catalytic reduction (SCR) systems (Scheme B). BLG 15 developed draft amendments to the NTC 2008 (annex 7 to document BLG 15/19) and draft Guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with SCR systems (annex 8 to document BLG 15/19).

4.26 The Committee recalled also that BLG 15 did not conclude on whether to retain or delete paragraph 7.7 of the draft SCR Guidelines, but agreed to invite MEPC 62 to decide.

4.27 The Committee considered comments on the draft amendments to the NTC 2008 and the draft SCR Guidelines in documents MEPC 62/4/13 (United States and Ireland), MEPC 62/4/14 (China), MEPC 62/4/15 (China), MEPC 62/11/5 (Germany) and MEPC 62/11/8 (IACS), and in particular, whether the aforementioned paragraph 7.7 should be retained or deleted.

4.28 After an exchange of views, the Committee agreed to retain paragraph 7.7 of the draft SCR guidelines, and to forward the draft guidelines to the Working Group for finalization with a view to adoption at this session. The Committee noted that, in addition to the provisions for verification under the NTC 2008, the retention of paragraph 7.7 may require the development of specific guidance for in-service verification of the combined engine/NO<sub>x</sub>-reducing device. The Committee also agreed to forward the draft amendments to the NTC 2008, to allow for scheme B, to the Working Group for finalization with a view to approval at this session.

#### ***Guidelines for reception facilities under MARPOL Annex VI***

4.29 The Committee recalled that BLG 15 developed draft Guidelines for reception facilities under MARPOL Annex VI, set out in annex 9 to document BLG 15/19, and agreed to forward the draft Guidelines for reception facilities to the Working Group for finalization, with a view to approval at this session.

#### **Outcome of FSI 19**

4.30 The Committee recalled that MEPC 61 requested the FSI Sub-Committee to update MEPC.1/Circ.718 on the revised form of supplement to the IAPP Certificate, taking into account the "Guidance on the timing of replacement of existing certificates by certificates issued after entry into force of amendments to certificates in IMO instruments" (MSC-MEPC.5/Circ.6). FSI 19 developed a draft MEPC circular on the revised form of supplement to the IAPP Certificate to amend MEPC.1/Circ.718, as set out in annex 5 to document FSI 19/19.

4.31 The Committee approved the draft MEPC circular on the revised form of supplement to the IAPP Certificate to amend MEPC.1/Circ.718 (FSI 19/19/Add.1, annex 5) and requested the Secretariat to issue it as MEPC.1/Circ.757.

4.32 The Committee noted paragraph 2.8 of document MEPC 62/11/1 on the perceived port State control problem regarding the first issuance of an IAPP Certificate to a new building, prior to the ship having received any bunkers and, consequently, when not being in possession of the required bunker delivery notes. The Committee agreed to invite interested delegations and observers to submit proposals to MEPC 63 on how the perceived problem should be addressed.

#### **Provisions for shipboard incineration under regulation 16 of MARPOL Annex VI**

4.33 The Committee considered document MEPC 62/7/7 (Russian Federation) proposing amendments to regulation 16.4 of MARPOL Annex VI with regard to the incineration of sewage sludge and sludge oil in main plants.

4.34 The majority of delegations was of the view that there was no compelling need to amend regulation 16.4 of MARPOL Annex VI and the Committee agreed to take no action on the proposal.

4.35 The Committee considered document MEPC 62/7/6 (IACS) raising matters related to fire protection of incinerator spaces and waste stowage spaces, and proposing that the matter should be referred to the Maritime Safety Committee (MSC).

4.36 The Committee agreed to forward the document to the Sub-Committee on Fire Protection for consideration with a view to advising both MSC and MEPC as to whether the survey and certification of fire protection of incinerator spaces and waste stowage spaces should fall under SOLAS or MARPOL.

## **Notifications to the Organization under MARPOL Annex VI**

### ***Development of a GISIS module for MARPOL Annex VI***

4.37 The Committee considered document MEPC 62/4/1 (Secretariat) presenting a draft GISIS module developed by the Secretariat as a possible portal for Parties to MARPOL Annex VI to make mandatory notifications to the Organization and to provide easy access to this information for the shipping industry.

4.38 The Committee noted the availability of the GISIS module for MARPOL Annex VI notifications and considered whether notification via GISIS fulfilled the requirements under MARPOL Annex VI on Contracting Parties' obligations to notify the Organization, and, once notified via GISIS, whether the requirement under MARPOL Annex VI for the Organization to transmit the information received to all Member States is fulfilled.

4.39 The Committee noted that the matter of notifications via GISIS will be considered in detail at the next session of the FSI Sub-Committee, when it will also consider the relevant issues raised in document MEPC 62/4/1, as applicable, for other conventions.

### ***Notification of approved method under regulations 13.7.1 and 13.7.2***

4.40 The Committee noted that MEPC.1/Circ.738 on certification of an approved method for certain MAN B&W S70MC engines was issued on 19 October 2010, and that MEPC.1/Circ.743 for certain WÄRTSILÄ RTA engines was issued on 17 February 2011.

4.41 The Committee considered document MEPC 62/7/8 (IACS) emphasizing that the information contained in these circulars was considered insufficient for implementing the relevant survey and proposing a clarification of the information to be included in the relevant IMO circular notifying the certification of an approved method.

4.42 In response to the above, the delegations of Denmark and Germany agreed to provide further information for clarification. However, both stated that MEPC.1/Circ.738 and MEPC.1/Circ.743 should neither be withdrawn, as proposed in document MEPC 62/7/8, nor put on hold, as the approval and notification procedures are in full compliance with MARPOL Annex VI and the applicable requirements of NTC 2008, and thus valid. Future applications for an approved method should be dealt with in the same manner taking into account the request for some additional procedural information.

4.43 The Committee agreed to forward the document to the Working Group for further consideration with a view to identifying the information required in the notification.

## **Report of the Correspondence Group on Assessment of Availability of Fuel Oil under MARPOL Annex VI**

4.44 The Committee recalled that MEPC 61 established a Correspondence Group on Assessment of Availability of Fuel Oil under MARPOL Annex VI to develop the methodology to be used in the review required under regulation 14 of MARPOL Annex VI (MEPC 61/24, paragraph 4.30).

4.45 The Committee recalled also that a number of delegations at MEPC 61 expressed the view that it was premature to initiate the review at that stage, and that 2015 or 2016 would be the appropriate time to start considering the methodology for a review to be completed by 2018.

4.46 The Committee considered document MEPC 62/4/5 (United States) providing the report on the work of the Correspondence Group, including a summary of discussions, remaining issues, and a draft methodology framework. The Correspondence Group invited the Committee to consider a draft methodology framework set out at annex, and the information provided in document MEPC 62/INF.9.

4.47 The Committee considered document MEPC 62/4/21 (ICS) providing comments on document MEPC 62/4/5 on the need for early validation and refinement of the fuel availability model.

4.48 A number of delegations supported the proposal by ICS to undertake an early validation of the proposed fuel availability draft methodology by carrying out a preliminary study to provide fuel availability scenarios. However other delegations were of the view that to carry out such a preliminary study at this early stage, using 0.1% sulphur content supplied for use in Emission Control Areas, risked not leading to an effective validation of the draft methodology for global fuel oil supply as the scope of such a validation study would be, by definition, limited to those ECAs and so not a global validation. Further, it was considered that an assessment of the methodology after the 1 January 2015 implementation date for the 0.1% standard would enable the experiences gained after that date to be used in further development of the methodology for the global review.

4.49 Having noted the views expressed, the Committee agreed to defer the consideration of this matter and invite further submissions to its next session on the proposed draft methodology and related timetable for detailed consideration and action, as appropriate.

#### **Provisions for sulphur oxides and particulate matter under regulation 14 of MARPOL Annex VI**

4.50 The Committee noted the following documents relating to sulphur provisions in marine fuel under regulation 14 of MARPOL Annex VI:

- .1 MEPC 62/4 (Secretariat) on the outcome of the monitoring of the worldwide average sulphur content of marine fuel oils supplied for use on board ship through 2010. The monitoring reports sulphur content in distillate fuels for the first time, which shows that 72.06% of distillate fuels is below 0.1% sulphur content.
- .2 MEPC 62/4/17 (ICS) on the potential impacts of the revised MARPOL Annex VI regulations in the North Sea and Baltic Sea Sulphur Emission Control Areas through the implementation of the 0.1% sulphur requirement in 2015, which quantifies the potential volume of modal shift with respect to German operators and ports; and
- .3 MEPC 62/4/19 (United States) on information with respect to published studies of the potential impacts of MARPOL Annex VI fuel sulphur requirements that apply in designated Emission Control Areas, commenting on document MEPC 62/4/17.

#### **Other air pollution issues**

4.51 The Committee noted document MEPC 62/INF.8 (Republic of Korea) on the reduction of time for Engine Shop Test and the subsequent economic and environmental effects.

***Ozone-depleting substances and coordination with UNEP***

4.52 The Committee recalled that MEPC 61 requested the Secretariat to continue liaising with the United Nations Environmental Programme (UNEP) and its Secretariat of the Montreal Protocol (the Ozone Secretariat) on the correct procedures for purchasing of HCFCs in foreign ports.

4.53 The Committee noted that the Secretariat continued liaising with the Ozone Secretariat and made presentations on regulation 12 of MARPOL Annex VI at regional UNEP meetings in the Caribbean area and the Asia and Pacific Islands countries to promote a more detailed understanding of the Montreal Protocol and MARPOL Annex VI regulations.

4.54 The Committee agreed to request the Secretariat to continue liaising with the Ozone Secretariat and, if appropriate, to prepare a draft MEPC circular for consideration at its next session to facilitate the Committee's deliberation of the issue.

**Establishment of the Working Group on Prevention of Air Pollution from Ships**

4.55 The Committee agreed to establish the Working Group on Prevention of Air Pollution from Ships with the following Terms of Reference:

"The Working Group on Prevention of Air Pollution from Ships is instructed, taking into account relevant documents as well as comments and decisions made in plenary, to:

- .1 develop draft Terms of Reference for the BLG Sub-Committee's work on amendments to guidelines for the sampling of fuel oil used on board ships for one session only;
- .2 finalize draft amendments to the NO<sub>x</sub> Technical Code to allow certification under scheme B, with a view to approval at this session;
- .3 finalize the draft Guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems, with a view to adoption at this session;
- .4 finalize draft Guidelines for reception facilities under MARPOL Annex VI, with a view to adoption at this session;
- .5 identify information to be included in the notification of an approved method under regulations 13.7.1 and 13.7.2 of MARPOL Annex VI; and
- .6 submit a written report to plenary on Thursday, 14 July 2011."

**Action taken on the report of the Working Group**

4.56 Having received and considered the report of the Working Group (MEPC 62/WP.10), the Committee approved it in general and, in particular (paragraph numbers are those of document MEPC 62/WP.10):

- .1 endorsed the Terms of Reference for the BLG Sub-Committee's work on development of guidelines on the sampling procedure for fuel oil being used on board ships (paragraph 3.5);

- .2 approved, with a view to circulation for subsequent adoption at its next session, the draft amendments to the NO<sub>x</sub> Technical Code 2008 to allow certification under scheme B (paragraph 4.3), as set out in annex 5;
- .3 instructed the BLG Sub-Committee to consider the use of continuous NO<sub>x</sub> monitoring to demonstrate compliance with the Tier III NO<sub>x</sub> emission limit (regulation 13.5.1) for two sessions (paragraph 5.5);
- .4 instructed the BLG Sub-Committee to consider procedures to certify gas fuelled engines, where engines operated solely on gas fuels are used to comply with Tier III NO<sub>x</sub> emission limits (paragraph 5.7);
- .5 adopted the 2011 Guidelines addressing additional aspects of the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with Selective Catalytic Reduction (SCR) systems (paragraph 5.11), by resolution MEPC.198(62), as set out in annex 6;
- .6 adopted the 2011 Guidelines for reception facilities under MARPOL Annex VI (paragraph 6.2), by resolution MEPC.199(62), as set out in annex 7;
- .7 noted that the notifiers of approved methods under regulations 13.7.1 and 13.7.2 of MARPOL Annex VI, disseminated by MEPC.1/Circ.738 and MEPC.1/Circ.743, agreed to provide additional guidance and information, as necessary, to identify engines which shall comply (paragraph 7.4); and
- .8 instructed the BLG Sub-Committee to develop guidelines or a circular (whichever is deemed more appropriate) covering the information to be submitted as part of the required notification from an Administration to IMO in respect of the approval of an Approved Method (paragraph 7.6).

## **5 REDUCTION OF GHG EMISSIONS FROM SHIPS**

5.1 The Committee recalled that significant progress had been made at its last session on all three building blocks in the Organization's GHG work, namely on technical, operational and market-based reduction measures. MEPC 61, having noted the necessity to develop appropriate inclusive working arrangements for further consideration of Market-Based Measures, agreed to hold an intersessional meeting dedicated to further progress on Market-Based Measures. With regard to technical and operational measures, MEPC 61 held extensive discussions and developed draft regulatory text for requirements of the EEDI and the SEEMP. MEPC 61, taking into account the need for further improvement of relevant Guidelines relating to the EEDI and the SEEMP, agreed to establish a correspondence group on energy efficiency measures for ships.

### **Order of discussion**

5.2 As suggested by the Chairman, the Committee agreed on the following order of discussions under this agenda item:

- .1 guidelines related to the EEDI and SEEMP;
- .2 other GHG issues;
- .3 establishment of and Terms of Reference for the Working Group;
- .4 policy and principles;
- .5 market-based measures;
- .6 UNFCCC matters; and
- .7 reduction target for international shipping.

5.3 Having initially debated, on a renewed proposal by the delegation of Brazil, whether all GHG related documents under agenda item 6 should be considered under agenda item 5 and referred to a working group on energy efficiency, the Chairman recalled his statement under agenda item 1 that a decision on the nature of the group would be taken, following consideration in plenary of items 5 and 6. The delegations of Brazil, India, Peru and Poland made statements on matters of principle or policy concerning the reduction of GHG emissions from ships. As requested, the statements are set out in annex 8.

#### **Guidelines related to the EEDI and SEEMP**

5.4 The Committee noted that, as agreed in principle at MEPC 61, a working group on GHG related issues would be re-established at this session under the Chairmanship of Mr. Koichi Yoshida (Japan).

#### ***Technical documents to be considered by the Working Group***

5.5 The Committee agreed that none of the technical documents would be introduced in plenary and would instead be referred directly to the Working Group following a brief debate in plenary, limited to providing the necessary instructions to the Working Group, and that the documents related to the Energy Efficiency Design Index (EEDI), the Ship Energy Efficiency Management Plan (SEEMP) and the Energy Efficiency Operational Indicator (EEOI) would be considered first by the Working Group. The Committee noted that several documents submitted under agenda item 6 made comments on and proposed amendments to the guidelines on EEDI and should therefore also be forwarded to the Working Group for further consideration.

#### ***Outcome of the Correspondence Group***

5.6 The Committee recalled that MEPC 61 developed draft Guidelines for the calculation of reference lines and draft Guidelines on survey and certification of the EEDI. However, due to time constraints, MEPC 61 could not consider the draft Guidelines on the method of calculation of the attained EEDI for new ships and the draft Guidelines for development of a ship energy efficiency management plan. MEPC 61 agreed therefore to establish a correspondence group on energy efficiency measures for ships for further development of the remaining guidelines and its future work plan.

5.7 The Committee considered documents MEPC 62/5/4 and MEPC 62/5/18 (Japan) providing the report of the Correspondence Group on Energy Efficiency Measures for Ships. The Group had developed further the draft Guidelines on the method of calculation of the attained EEDI for new ships and the draft Guidelines for the development of a SEEMP. The Group had also developed a draft work plan with timetable for the development of 1) EEDI frameworks for ship types and sizes, as well as propulsion systems not covered by the current EEDI requirements, and 2) remaining EEDI and SEEMP guidelines to be developed.

5.8 The Committee expressed its appreciation for the significant work undertaken by the Correspondence Group.

5.9 The Committee approved the report in general and instructed the Working Group to further improve the draft guidelines and further develop the draft work plan with a time schedule for future progress on technical and operational measures for ships.



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**Calculation method of the EEDI**

5.10 The Committee noted document MEPC 62/5/6 (Greece) proposing that the EEDI formula could be improved by calculating it at a specified speed, depending on ship type and size, to ensure optimization of ship design for energy efficiency, and should be re-addressed, especially if an MBM proposal that is linked to the EEDI is considered further.

5.11 The Committee considered document MEPC 62/5/24 (Republic of Korea) proposing that, in the case of container ships, the EEDI should be calculated using 80% DWT capacity of a ship, instead of 65% DWT, in order to reflect the actual loading condition of container ships, and the relevant part of the draft Guidelines and reference values should be modified accordingly.

5.12 The observer delegation of the World Shipping Council (WSC) highlighted that WSC had undertaken extensive data collection of load factors of the global container shipping fleet, which indicated that the mean load factor for container ships is 71%. Therefore, the appropriate figure for the container ship capacity factor should be 70%. A number of delegations supported this position, noting that they had made similar findings in their investigations into the matter.

5.13 Some delegations considered that document MEPC 62/5/24 provided further evidence to demonstrate that the EEDI formula was not sufficiently developed and that it was premature for mandatory application. Other delegations considered the amendment of the container ship capacity factor from 65% to 70% to be fine tuning of the EEDI calculation formula only and a reasonable incremental amendment based on the most recent experience and data.

5.14 The Committee agreed that the EEDI value for container ships could be calculated using 70% DWT. The Committee instructed the Working Group on Energy Efficiency Measures for Ships to consider whether the capacity factor for container ships should therefore remain at 65% DWT or 70% DWT, and to amend relevant draft guidelines accordingly.

5.15 The Committee noted that, in agreeing to the amended capacity factor for container ships, along with other possible amendments made at the session, this would result in a consequential amendment to the reference line, and the parameters a and c, and would affect both the draft regulatory text and the guidelines.

**Other GHG issues*****Safety issues related to the EEDI – propulsion power and adverse weather conditions***

5.16 The Committee recalled that MEPC 61 held a debate on safety issues related to the EEDI, such as the possibility of under-powered ships and, to avoid any adverse effects on safety, agreed to insert a provision in the draft regulatory text stating that "the installed power shall not be less than the propulsion power needed to maintain the manoeuvrability of the ship under adverse conditions as defined in the guidelines". In this context, IACS had informed that it would develop and submit a first draft of such guidelines to this session for further consideration.

5.17 The Committee considered documents MEPC 62/5/19 and MEPC 62/INF.21 (BIMCO, CESA, IACS, INTERCARGO, INTERTANKO and WSC) presenting draft interim guidelines to determine whether available propulsion power is sufficient to enable safe manoeuvring in adverse weather conditions in the context of the EEDI framework. To facilitate an early implementation, the co-sponsors suggested a simplified assessment in the first phase.

5.18 The Committee agreed that the draft regulatory text and associated guidelines should ensure that the safety concerns raised are satisfactorily taken into account. The Committee instructed the Working Group, in principle, to further develop the draft interim guidelines on propulsion power and safe manoeuvring in adverse weather conditions, using the annex to document MEPC 62/5/19 as a basis.

#### ***Marginal abatement costs and cost-effectiveness of energy efficiency measures***

5.19 The Committee noted that identification of possible abatement technologies and assessment of their reduction potential, as well as calculation of their cost-effectiveness and identification of constraints and barriers to implementation of such technologies, were all vital elements for the Committee to be able to continue to base its decisions on sound science.

5.20 The Committee expressed appreciation to IMarEST for providing valuable information in documents MEPC 62/5/2 and MEPC 62/INF.7, containing an updated study on the economics and cost-effectiveness of technical and operational measures.

5.21 Recognizing that document MEPC 62/INF.7 could be a useful document for the industry as a tool in decision-making on what technologies or operational measures to employ, the Committee agreed to instruct the Working Group to use the information in the updated IMarEST Study in document MEPC 62/INF.7 in its work. It also agreed to publish document MEPC 62/INF.7 on the IMO website as a useful background document.

#### ***Matters related to the Energy Efficiency Operational Indicator (EEOI)***

5.22 The Committee recalled that MEPC 61 noted document MEPC 61/5/29 (Republic of Korea) on the Energy Efficiency Operational Indicator (EEOI) and agreed to defer it to a future session as EEOI was not reviewed at MEPC 61. In this regard, the Russian Federation had submitted document MEPC 62/5/11 to this session, with a proposal on the calculation procedure for the EEOI.

5.23 The Committee agreed to forward the two documents to the Working Group and to instruct it to further consider the EEOI guidelines.

#### ***Model course for energy efficient operation of ships***

5.24 The Committee recalled that MEPC 61 noted the development of an IMO model course on the ship energy efficiency management plan, through an MoU with the World Maritime University (WMU). The course would contribute to IMO's environmental protection and capacity building goals set out in resolutions A.947(23) and A.998(25), by promulgating industry's "best practices" to promote energy efficiency and to build awareness and capacity to reduce greenhouse gas emissions from international shipping.

5.25 The Committee agreed to forward documents MEPC 62/5/29 and MEPC 62/INF.39 (Secretariat), providing information on the development of a draft IMO model course for energy efficiency operation of ships prepared by WMU, to the Working Group.

5.26 The Committee agreed to instruct the Working Group to review the draft model course and provide comments.

#### ***Information documents***

5.27 The Committee noted the following information documents and instructed the Working Group to take them into account in its deliberations, as appropriate:

MEPC 62/INF.10	OCIMF	Example of a Ship Energy Efficiency Management Plan
MEPC 62/INF.12	OCIMF	Project to develop a SEEMP using a structured methodology and the resulting improvement in Energy Efficiency
MEPC 62/INF.16	Cruise Lines International Association (CLIA)	Consideration of the Energy Efficiency Design Index (EEDI) for New Cruise Ships
MEPC 62/INF.23	United Kingdom	Potential additional energy efficiency benefits arising from advanced fluoropolymer foul release coatings
MEPC 62/INF.34	Germany	Global Wind Specification along the Main Global Shipping Routes to be applied in the EEDI Calculation of Wind Propulsion Systems
MEPC 62/INF.35	Germany	Calculation Method to be applied in the EEDI Calculation of Wind Propulsion Systems
MEPC 62/INF.37	Japan	Detail treatment of innovative energy efficiency technologies for calculation of the Attained EEDI

### **Establishment of and Terms of Reference for the Working Group on Energy Efficiency Measures for Ships**

5.28 The Committee noted that the working group established at this session should address various matters related to GHG emissions from ships. The Committee agreed to establish it under the chairmanship of Mr. Koichi Yoshida of Japan. The Working Group should be instructed to consider matters related to technical and operational measures.

5.29 The delegation of China made reference to its submission MEPC 62/6/16, requesting that it be considered under agenda item 5. The delegation of Norway, supported by a number of other delegations, emphasized that as the document contained comments and proposals related to the circulated draft amendments, it should be considered under agenda item 6. The Committee agreed to address relevant parts of the document under both agenda items.

5.30 Having decided, following consideration of both parts of agenda item 6, to convene a working group and a drafting group on energy efficiency matters (see paragraph 6.82), the Committee established the Working Group on Energy Efficiency Measures for Ships with the following reduced Terms of Reference:

- .1 develop a draft work plan with time schedule for future progress on technical and operational measures for ships not covered by the current EEDI framework, using the annex to document MEPC 62/5/18 as a basis;

- .2 consider to incorporate the cubic capacity correction factor for chemical tankers as proposed in document MEPC 62/6/13 (IPTA) into the draft guidelines on the method of calculation of the attained EEDI for new ships;
- .3 review the draft IMO Model Course for energy efficient operation of ships set out in documents MEPC 62/5/29 and MEPC 62/INF.39 and provide comments to the WMU; and
- .4 submit a written report to plenary on Thursday, 14 July 2011.

***Action taken on the report of the Working Group***

5.31 The Committee, having received the report of the Working Group (MEPC 62/WP.15), noted the following amendments to the document:

- .1 Paragraph 4.2 is replaced by the following:

"The Group agreed to integrate the correction factor into the EEDI calculation guidelines, and doing so would enhance credibility and confidence in the EEDI formula. However, the Group considered that the correction factor presented in document MEPC 62/6/13 would require fine tuning."
- .2 Paragraph 4.3 is deleted.
- .3 Paragraph 6.5 is replaced by the following:

"The Group noted that the guidelines for determining minimum propulsion power and speed to enable safe manoeuvring in adverse weather conditions should be developed in a relatively short time, since the guidelines are referred to in the regulatory framework of the EEDI as being voluntary."
- .4 Paragraphs 8.1.2 and 8.1.4 are replaced by the following:
  - .2 endorse the agreement of the Group that cubic capacity correction factor for chemical tankers should be included in the guidelines on EEDI calculation (paragraph 4.2);
  - .4 endorse the draft work plan for further development of technical and operational measures for ships, as set out in annex 1 (paragraph 6.7);"

5.32 Having considered the report of the Working Group, the Committee approved it in general and, in particular (paragraph numbers are those of document MEPC 62/WP.15, as amended):

- .1 invited interested delegations to provide practical information and examples of the energy efficient operation of ships to the Secretariat by 31 August 2011 for inclusion in the IMO Model Course (paragraph 3.3);
- .2 endorsed the agreement of the Group that cubic capacity correction factor for chemical tankers should be included in the guidelines on EEDI calculation (paragraph 4.2);
- .3 endorsed the view of the Group that the 70% DWT capacity is to be used for container ships in EEDI calculation (paragraph 5.3);

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- .4 endorsed the work plan and schedule for further development of technical and operational measures for ships, as set out in annex 9 (paragraph 6.7); and
  - .5 agreed to the holding of an intersessional meeting of the Working Group on Energy Efficiency Measures for Ships with the terms of reference, as set out in annex 10 (paragraph 7.3).

5.33 The Committee expressed its appreciation for the significant work undertaken by the Working Group.

### Policy and principles

5.34 The Committee considered the following documents on different policy and principle aspects, and on whether the Organization should focus on the technical and operational measures only or continue to pursue all the three elements called for in Assembly resolution A.963(23):

MEPC 62/INF.2	Secretariat	Ministerial declaration on global environment and energy in transport
MEPC 62/INF.6	Republic of Korea	Results of the fourth Seoul International Maritime Forum
MEPC 62/5/9	Turkey	Turkey's position on GHG emission issues
MEPC 62/5/10	China, Saudi Arabia and South Africa	Comments on Proposed Mandatory Energy Efficiency Regulation
MEPC 62/5/13	Bahamas	Mandatory CO <sub>2</sub> emission cut targets through technical and operational measures
MEPC 62/5/20	Brazil	Considerations on technical and operational measures to reduce GHG emissions from ships
MEPC 62/5/28	Panama	Comments on the report of the third Intersessional Meeting of the Working Group on Greenhouse Gas Emissions from ships
MEPC 62/5/27	India	Possible incompatibility between WTO Rules and an MBM for international shipping

5.35 As suggested by the Chairman, the Committee agreed on the following order of discussions:

- .1 information documents on GHG issues;
- .2 general views on IMO's GHG Work – policy and principles; and
- .3 relation with WTO Rules (to be considered together with other documents on market-based measures).

### **Information documents on GHG Issues**

5.36 The Committee noted the Ministerial declaration on global environment and energy in transport in document MEPC 62/INF.2 by the Secretariat.

5.37 The Committee also noted the results of the fourth Seoul International Maritime Forum in document MEPC 62/INF.6 by the Republic of Korea.

### **General views on IMO's GHG Work – policy and principles**

5.38 The Committee recalled that an extensive exchange of views on different policy and principle questions had taken place at previous sessions, and more recently also at the third intersessional meeting of the Working Group on GHG Emissions from Ships (GHG-WG 3).

5.39 The Committee considered documents MEPC 62/5/9, MEPC 62/5/10, MEPC 62/5/13, MEPC 62/5/20 and MEPC 62/5/28 and held an extensive exchange of views on the matters raised therein, noting that many of the issues had already been discussed in depth at earlier sessions, in particular those concerning the obligations assumed by Parties to Annex I of the UNFCCC under the global climate change negotiations; the reconciliation of the principles of "no more favourable treatment" and CBDR; the need to provide for capacity-building, technology transfer, financial assistance and impact assessments relating to the energy efficiency measures, the appropriate legal instrument for the introduction of technical, operational and market-based measures; and the need to further develop such measures before their approval and adoption.

5.40 Many delegations expressed interest in the Bahamas proposal and their wish that the proposal should be further developed and considered in the future. Nevertheless, a number of delegations also raised concerns noting that the proposal did not address the CBDR principle, nor technical co-operation and capacity-building. Questions concerning cost effectiveness, the additional administrative burden, the net reductions and the verification feasibility were also raised.

5.41 The Committee noted the statement by the observer of CESA during the debate on GHG issues. As requested, the statement is set out in annex 11.

5.42 In concluding that debate, the Committee invited the Bahamas to further develop its proposal set out in document MEPC 62/5/13 and to submit the refined version to a future session, so as to enable the Committee to assess the proposal's feasibility and effectiveness and to consider whether it may serve as an alternative to an MBM or be used as an interim solution.

5.43 The Committee also decided to consider, under agenda item 6, paragraphs 14 and 15 of document MEPC 62/5/10.

### **Market-Based Measures**

5.44 Due to time constraints, the Committee could not consider Market-Based Measures and agreed to defer the consideration of the following documents to MEPC 63:

MEPC 62/5/1	Secretariat	Report of the third Intersessional Meeting of the working group on greenhouse gas emissions from ships
MEPC 62/5/7	Greece	MBM proposals: A way ahead

MEPC 62/5/8	United States	Efficiency improvements within the international marine sector
MEPC 62/5/13	Bahamas	Mandatory CO <sub>2</sub> emission cut targets through technical and operational measures
MEPC 62/5/14	WWF	Ensuring no net incidence on developing countries from a global maritime MBM
MEPC 62/5/15	Germany	Possible uses of revenues generated by an Emissions Trading System
MEPC 62/5/27	India	Possible incompatibility between WTO Rules and a market-based measure for international shipping
MEPC 62/5/33	Cyprus, Denmark, Marshall Islands, Liberia, Nigeria, Republic of Korea and IPTA	Strengths and weaknesses
MEPC 62/5/34	France	The possible use of revenues generated by an Emissions Trading System

#### UNFCCC matters

5.45 Due to time constraints, the Committee could not consider UNFCCC matters and agreed to defer the consideration of the following documents to MEPC 63:

MEPC 62/5	Secretariat	Outcome of the United Nations Climate Change Conference held in Cancún, Mexico from 29 November to 10 December 2010
MEPC 62/5/Add.1	Secretariat	Outcome of the United Nations Climate Change Talks held in Bonn, Germany from 6 to 17 June 2011
MEPC 62/INF.3	Secretariat	High-level Advisory Group of the United Nations Secretary-General on Climate Change Financing

#### Reduction target for international shipping

5.46 Due to time constraints, the Committee could not consider a reduction target for international shipping and agreed to defer its consideration of the matter to MEPC 63, taking into account the following documents:

MEPC 60/4/23	Norway	Alternative emission caps for shipping in 2020 and 2030
MEPC 60/4/28	WSC	Emission "Caps" and Reduction Targets

## **6 CONSIDERATION AND ADOPTION OF AMENDMENTS TO MANDATORY INSTRUMENTS**

### **GENERAL**

6.1 The Committee recalled that, under item 1, it agreed to a proposal by the Chairman to consider the submissions under this item in two parts: Part I and Part II (see paragraph 1.7).

### **PART I**

6.2 The Committee recalled that, at MEPC 61, it had approved, with a view to adoption at this session, draft amendments to:

- .1 MARPOL Annex IV (Designation of the Baltic Sea as a Special Area) (MEPC 61/24, paragraph 7.35 and annex 13);
- .2 MARPOL Annex V (Revised MARPOL Annex V) (MEPC 61/24, paragraph 7.22.1 and annex 11); and
- .3 MARPOL Annex VI (Amendments to regulations 13 and 14 and Appendix VII in relation to the designation of the United States Caribbean Sea Emission Control Area and other related matters (MEPC 61/24 and MEPC 61/24/Corr.1, paragraphs 4.34 and 4.36 and annex 2).

6.3 The Committee noted that the texts of the above-mentioned approved amendments were circulated by the Secretary-General on 2 November 2010, under cover of Circular letter No.3118, in accordance with the provisions of article 16(2)(a) of the MARPOL Convention.

6.4 The Committee also recalled that MEPC 61 had agreed, in principle, that a drafting group would be established at this session to make any editorial changes to the draft amendments, as necessary, before adoption by the Committee.

### **Amendments to MARPOL Annex IV**

6.5 The Committee noted that the proposed amendments as approved by MEPC 61, together with the draft MEPC resolution on their adoption, were set out in document MEPC 62/6, prepared by the Secretariat.

6.6 The Committee considered comments on the proposed amendments by CLIA (MEPC 62/6/25), aimed at separation of the text creating the concept of Special Areas from the text establishing the Baltic Sea Special Area, and noted information on the ongoing activities of the Baltic Sea States, under the Helsinki Commission, to promote their joint efforts to upgrade the sewage reception facilities in major passenger ports in the Baltic Sea (MEPC 62/INF.20).

6.7 The Committee also agreed to consider, under this agenda item, a proposal by IACS concerning a perceived incoherence within the text of MARPOL Annex IV, unrelated to the proposed amendments, originally tabled under item 7 of the agenda (MEPC 62/7/5). IACS proposed minor corrections.

6.8 The Committee noted that, in the currently proposed amendments to Annex IV, the discharge of sewage within a special area would be prohibited under regulation 11.3 for new passenger ships on, or after 1 January 2013, and for existing passenger ships on, or after 1 January 2018.



6.9 The delegation of Finland, on behalf of the Baltic Sea States, proposed to relax the application deadline for new passenger ships to 1 January 2016, subject to regulation 12*bis*, subparagraph 2, while keeping the deadline for existing passenger ships at 1 January 2018, but now also subject to regulation 12*bis*, subparagraph 2. A corresponding relaxation was proposed for the deadlines under the proposed regulation 1.7*ter* concerning the application to new-build passenger ships.

6.10 Several delegations expressed their support for the "package" proposed by Finland.

6.11 The Committee noted the concerns of some delegations that the technical standards for sewage treatment equipment had yet to be established to meet the proposed discharge requirements under regulation 11.3 and that, without these, treatment equipment for use on board ships might not be available in time before the special area provisions for the Baltic Sea area would enter into force. Other delegations disagreed, referring to the ongoing work in the DE Sub-Committee on the development of revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants, due for completion in 2012, and trusting that adequate equipment would become available in time, certainly with the package of relaxed application deadlines, as proposed by the Baltic Sea States.

6.12 Concerns were also expressed at the pace of provision of port reception facilities for sewage from ships: there should be a balance between the provision by Parties of adequate port reception facilities and the availability of technical standards and sewage treatment equipment on board ships.

6.13 It was concluded that the issue of the relaxed deadlines and the comments by IACS should be included in the amendments and that the Drafting Group would have the flexibility of addressing the issue of the technical equipment standards, either in the regulations or in a draft MEPC resolution.

6.14 With the above-mentioned instructions, the Committee agreed to refer the draft amendments to the Drafting Group for editorial review.

#### **Amendments to MARPOL Annex V (Revised MARPOL Annex V)**

6.15 The Committee noted that the proposed amendments, as approved by MEPC 61, and the draft MEPC resolution on their adoption, were set out in document MEPC 62/6/1 by the Secretariat.

6.16 The Committee agreed that the plenary debate should aim at providing the Drafting Group with necessary instructions to enable it to do its work and that the following six documents commenting on the proposed amendments should be introduced in plenary:

- .1 MEPC 62/6/6 (Australia) – Revised MARPOL Annex V, animal carcasses and the London Convention/Protocol;
- .2 MEPC 62/6/10 (Netherlands) – Revision of MARPOL Annex V (substantive comments only);
- .3 MEPC 62/6/11 (Secretariat) – Outcomes of the joint session of the LC/LP Scientific Groups in relation to management of spoilt cargoes;
- .4 MEPC 62/6/17 (United States) – Comments on draft amendments to MARPOL Annex V (substantive comments only);

- .5 MEPC 62/6/18 (ICS, BIMCO and INTERCARGO) – Comments on proposed amendments to MARPOL Annex V; and
- .6 MEPC 62/6/22 (CSC) – Issues arising from the Committee's work on the revision of MARPOL Annex V.

6.17 The Committee also agreed that the documents listed below were to be considered directly by the Drafting Group:

- .1 MEPC 62/6/8 (United States) – Editorial comments on draft amendments to MARPOL Annex V;
- .2 MEPC 62/6/10 (Netherlands) – Revision of MARPOL Annex V (editorial comments); and
- .3 MEPC 62/6/17 (United States) – Comments on draft amendments to MARPOL Annex V (editorial comments).

6.18 The Committee considered the proposal by Australia not to specify in Annex V, regulation 4.1.4, a mortality rate for livestock carried on board as cargo using a percentage to activate a trigger to the London Convention and Protocol regime (MEPC 62/6/6). Instead, the term "mass mortalities" should be introduced, to be accompanied by guidance in the Annex V guidelines, which the delegation had suggested in a separate document (MEPC 62/7/2), on the detail and procedures for reporting circumstances of mass mortalities and for determining measures to be taken, including where LC/LP approvals should be sought.

6.19 The Committee also considered the suggestion of the Australian delegation that it may be impractical for some voyages to implement the requirement for discharges to take place beyond 100 nautical miles from the nearest land, as such situations could create an unacceptable threat to human health and safety. The delegation therefore proposed to include a new paragraph 5 to regulation 7 excepting the discharge of animal carcasses where the retention might present a health risk, suggesting that such discharges shall not occur within 12 nautical miles of the nearest land, and that it must be ensured that the carcass will sink immediately. Also, the discharges shall be subject to the approval of the coastal State. Finally, as the revised Annex V now recognized animal carcasses as garbage, the mortalities that gradually occur during a voyage would fall under the Annex V discharge requirements and, therefore, Australia noted that the LC/LP guidance on management of spoilt cargoes (LC-LP.1/Circ.30) should be reviewed following the adoption of the revised MARPOL Annex V.

6.20 The Committee considered proposals by the Netherlands (MEPC 62/6/10):

- .1 to re-categorize garbage into three categories as follows: "food wastes"; "cargo residues" and "all garbage except food wastes and cargo residues";
- .2 not to create a relaxation of the current requirement in regulation 5(5)(b) of Annex V by which administrations "shall ensure that *all* ships ..., before entering the Antarctic area, have sufficient capacity on board for the retention of all garbage while operating in the area". In the approved text of draft regulation 6.2.2 this provision had been relaxed to read: "sufficient capacity on board for the retention of *garbage prohibited for discharge*"; and
- .3 to clarify which items fall within the scope of "introduced avian products" and what is covered under the expression "poultry and poultry parts".

6.21 The Committee considered a report by the Secretariat on the outcomes of deliberations by the LC/LP Scientific Groups on the issue of spoilt cargoes, based on the 12 responses received to questionnaire LC-LP.1/Circ.41, distributed in November 2010, asking LC/LP Parties and maritime administrations to assist in defining the management of spoilt cargoes in light of the proposed amendments to MARPOL Annex V (MEPC 62/6/11). The results showed that the occurrences of spoilt cargo were neither routine nor predictable and that high mortality events in shipping livestock were rare. The technical basis of the proposed 2% threshold level in regulation 4.1.4, distinguishing between the Annex V discharge requirements and the LC/LP dumping requirements, was unclear and seemed to be based on animal management practices rather than ship operating procedures or impacts on the marine environment. In line with the proposals by Australia (MEPC 62/6/6) and the United States (MEPC 62/6/17) the Scientific Groups expressed the view that the revised MARPOL Annex V guidelines may be more appropriate to further elaborate on death rates that are routine and should therefore be covered under Annex V. It was noted that only limited information is available on industry practices with respect to disposal of small quantities of cargo that routinely spoil or die during a voyage, including that of animal carcasses. It would therefore be very helpful to continue efforts to collect additional information, e.g., through the Garbage Record Books, contacts with P&I Clubs and dumping permits, etc., as part of the ongoing information exchange on this boundary issue between LC/LP and MARPOL Annex V. Finally, once the revised MARPOL Annex V had been adopted, it would be logical for the LC/LP Parties to consider the implications of the new requirements and what adjustment might be needed to the joint spoilt cargo guidance of 2009 (LC-LP.1/Circ.30 and MEPC.1/Circ.688).

6.22 The Committee considered the proposal by the United States to revise regulation 4.1.4, in line with the proposals in this respect by Australia and the LC/LP Scientific Groups, but also suggesting that fish that die during live transport as cargo should be regarded as "animal carcasses" (MEPC 62/6/17). The delegation therefore proposed revising regulation 4.1.4 to read as follows:

*"For animal carcasses, including terrestrial and aquatic species, discharge shall occur as far from the nearest land as possible, taking into account the guidelines developed by the Organization."*

6.23 The Committee considered amendments proposed by ICS, BIMCO and INTERCARGO to resolve the ambiguity concerning cargo hold washing agents as the present text was not clear on whether cargo hold cleaning agents should be considered as garbage or not (MEPC 62/6/18). It was proposed to include cargo hold cleaning agents on the same basis as cleaning agents used for deck washing and that their discharge should be permitted.

6.24 The proponents also mentioned the practical difficulties that the "en route" provisions of the current text create for the discharge of washing agents within Special Areas. The way regulation 6 is drafted implied that, to wash decks and external surfaces with cleaning agents, the ship must be "en route" when in a Special Area. This would mean that decks cannot be washed in ports within Special Areas, which is required before departing port for practical, safety and health reasons. This issue had been discussed and accepted in the Annex V Working Group during MEPC 61, and it was proposed that regulation 6.1.3 should be numbered as 6.2 to remove the "en route" provision.

6.25 The observer from CSC acknowledged that considerable progress had been made during the review of Annex V and welcomed the move towards a "general prohibition" of the discharge of garbage from ships. However, he raised a number of issues associated with the enforcement of the revised Annex V that might undermine its effectiveness at reducing ship-source garbage (MEPC 62/6/22).

6.26 In the ensuing discussion, the delegation of Australia indicated that the language provided by the United States for the proposed regulation 4.1.4 (see paragraph 6.22 above) offered a good compromise and withdrew its proposal. Some delegations did not support the discharge of cargo hold cleaning agents as "garbage".

6.27 The Committee considered that it would only be feasible to complete the revised MARPOL Annex V at this session, if the substantive comments and proposals received could be reviewed by a working group: further postponement of the adoption of the revised Annex V was deemed inappropriate. It was therefore agreed that, although the Committees' Guidelines on the organization and method of work did not allow for an extra working group, the Drafting Group should become a working group, but only for the final review of MARPOL Annex V.

6.28 The Committee agreed to refer the draft amendments, as well as the comments to the drafting/working group for review.

### **Amendments to MARPOL Annex VI (Designation of the United States Caribbean Sea Emission Control Area and other related matters)**

6.29 The Committee recalled that MEPC 60 adopted, by resolution MEPC.190(60), amendments to MARPOL Annex VI to designate the North American Emission Control Area, which was to enter into force on 1 August 2011.

6.30 The Committee also recalled that MEPC 61 considered and approved amendments to MARPOL Annex VI with a view to adoption, at this session, to designate the United States Caribbean Sea Emission Control Area, as given in the annex to document MEPC 62/6/2, together with the draft MEPC resolution on their adoption, (MEPC 61/24 and MEPC 61/24/Corr.1, paragraphs 4.34 and 4.36, and annex 2).

6.31 In this regard, the Committee noted that, once adopted, the United States Caribbean Sea Emission Control Area would be added in paragraph 3 of regulation 14, and that the existing subparagraphs should be re-numbered as a result, leading also to a consequential amendment to ensure correct cross-referencing in paragraph 7 of regulation 14.

6.32 The delegation of Japan raised the issue that if the amendments on the United States Caribbean Sea Emission Control Area were adopted at this session, a twelve month "grace period" would apply under regulation 14.7 of MARPOL Annex VI. During that period ships operating in that ECA would be exempt from several requirements under this regulation. The delegation also raised the same issue regarding the North American ECA which is already designated in the regulation and proposed that the application should be clarified in the regulations and that an MEPC circular should be prepared announcing the date of taking effect of this ECA so as to avoid any ambiguity. The delegation of the United States supported this proposal.

6.33 The observer from IACS proposed to insert the new regulation 14.8 as regulation 14.4.4, in order to avoid unnecessary cross-referencing.

6.34 The Committee agreed to refer the draft amendments, as well as the above-mentioned proposals to the Drafting Group for editorial review.

### **Establishment of the Drafting Group on Amendments to Mandatory Instruments (Part I)**

6.35 The Committee established the Drafting Group on Amendments to Mandatory Instruments (Part I), under the chairmanship of Mr. Zafrul Alam (Singapore), to deal with the draft amendments deliberated so far, with the following Terms of Reference:

Using documents MEPC 62/6, MEPC 62/6/1, and MEPC 62/6/2 as a basis, and taking into account the relevant submissions under this agenda item, document MEPC 62/7/5, any comments and proposals and the decisions made in plenary, the Drafting Group is instructed to:

- .1 review and finalize the texts of proposed amendments to:
  - .1 MARPOL Annex IV (Designation of the Baltic Sea as a Special Area); and
  - .2 MARPOL Annex VI (Designation of the United States Caribbean Sea Emission Control Area and other related matters);
- .2 review and finalize two draft MEPC resolutions for adoption of the two sets of amendments to MARPOL Annex IV and Annex VI, respectively;
- .3 upon completion of the above-mentioned tasks, the Drafting Group shall continue as *working group* to review and finalize the text for the proposed amendments to MARPOL Annex V, together with an accompanying draft MEPC resolution for adoption;
- .4 develop an MEPC circular on the date of taking effect of the proposed amendments to regulation 13 and 14 of MARPOL Annex VI, when adopted; and
- .5 submit a written report to the plenary on Thursday, 14 July 2011.

#### **Report of the Drafting Group and action taken by the Committee (Part I)**

6.36 The Committee noted, in the report of the Drafting Group (MEPC 62/WP.11), that:

- .1 with regard to the proposed new regulation 12*bis*.1.1 in MARPOL Annex IV on reception facilities for passenger ships in special areas, the Drafting Group could not reach agreement on whether **all** ports should provide sewage reception facilities, analogous to similar special areas requirements of other MARPOL Annexes. Those delegations objecting to inclusion of the word "all" did so on grounds of unreasonable cost implications. Consequently, the word "all" had been kept in brackets for decision by the Committee;
- .2 the *Working Group* agreed not to create a relaxation of the current requirement in regulation 5(5)(b) of Annex V by which administrations "shall ensure that all ships ..., before entering the Antarctic area, have sufficient capacity on board for the retention of *all* garbage while operating in the area". Consequently, the phrase "*garbage prohibited for discharge*" in the text approved by MEPC 61 was deleted in draft regulation 6.3.2;
- .3 the Working Group considered a proposal to include in regulation 6.1.2.3 (inadequacy of port reception facilities for garbage in special areas) a cross-reference to regulation 8.2 on the mandatory *reporting* of such inadequacies. The proponents argued that without reporting, the lack of such facilities would continue. Although some delegations expressed concern about the lack of adequate port reception facilities in special areas for the reception of cargo residues, the Working Group agreed not to include a cross-reference; and

- .4 the Working Group agreed to recommend that guidance should be developed for new entries made in the final text of the proposed amendments, where appropriate, as part of the current review of the Guidelines for the Implementation of MARPOL Annex V.

6.37 Having considered the report of the Drafting Group, the Committee approved it in general and, in particular:

- .1 agreed that the text of MARPOL Annex IV, new regulation 12*bis*.1.1 regarding reception facilities for passenger ships in special areas should read: "facilities for the reception of sewage should be provided in ports and terminals which are in a special area and which are used by passenger ships; ...";
- .2 adopted, by resolution MEPC.200(62), amendments to the Annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (Special Area Provisions and the Designation of the Baltic Sea as a Special Area under MARPOL Annex IV), as set out in annex 12;
- .3 adopted, by resolution MEPC.201(62), amendments to the Annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (Revised MARPOL Annex V), as set out in annex 13;
- .4 endorsed the recommendation that guidance should be developed for new entries made in the final text of the amendments, where appropriate, as part of the current review of the Guidelines for the Implementation of MARPOL Annex V;
- .5 adopted, by resolution MEPC.202(62), amendments to the Annex of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (Designation of the United States Caribbean Sea Emission Control Area and exemption of certain ships operating in the North American Emission Control Area and the United States Caribbean Sea Emission Control Area under regulations 13 and 14 and Appendix VII of MARPOL Annex VI), as set out in annex 14;
- .6 instructed the Secretariat to check the amendments carefully for any editorial omissions and, if necessary, insert these in the final text of the amendments;
- .7 endorsed the recommendation that the co-ordinates of the United States Caribbean Sea Emission Control Area should be included in an MEPC circular (MEPC.1/Circ.755), together with a map;
- .8 approved the outline for a draft MEPC resolution in relation to the designation of the Baltic Sea as a Special Area under MARPOL Annex IV, as set out in annex 15 for further development with a view to adoption at MEPC 63; and
- .9 approved the MEPC circular on the date of taking effect of the amendments to regulations 13 and 14 of MARPOL Annex VI adopted by resolution MEPC.202(62), as set out in annex 16 and requested the Secretariat to distribute it as MEPC.1/Circ.756 as soon as possible.

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**PART II****Amendments to MARPOL Annex VI (Mandatory technical and operational measures on energy efficiency for ships)**

6.38 The Committee recalled that MEPC 61 considered draft regulations on energy efficiency for ships for mandatory application of the EEDI and SEEMP by inclusion of such regulations in MARPOL Annex VI.

6.39 The Committee also recalled that MEPC 61 considered the legal form of the draft regulations and that MEPC 60 had agreed by majority that MARPOL Annex VI was the appropriate vehicle for enacting mandatory energy efficiency requirements for ships (MEPC 60/22, paragraph 4.34). A number of delegations supported the inclusion of the energy efficiency measures in MARPOL Annex VI, while a number of other delegations opposed this as they maintained the view that MARPOL Annex VI was not the appropriate legal instrument to regulate energy efficiency measures. MEPC 61 came to no conclusion on this issue.

6.40 The Committee noted that the Secretary-General received, on 17 November 2010, a request to circulate the proposed amendments to MARPOL Annex VI from the Governments of Australia, Belgium, Canada, Denmark, Germany, Japan, Liberia, Norway and the United Kingdom in accordance with article 16(2)(a) of the MARPOL Convention and that, consequently, the proposed amendments were circulated by the Secretary-General, in accordance with article 16(2)(a) of the MARPOL Convention, under cover of Circular letter No.3128 of 24 November 2010.

**Circulation of the proposed amendments to MARPOL Annex VI**

6.41 The Committee noted document MEPC 62/6/9 in which India queried Circular letter No.3128. India did not share the understanding that the provisions of article 16(2)(a) of the MARPOL Convention had been met, thus enabling IMO to circulate the proposed amendments. The delegation also argued that Article 31 of the Vienna Convention on the Law of Treaties had not been adhered to by the Parties requesting the circulation and that IMO's "non-discriminatory approach" and the principle of "no more favourable treatment" of ships contradicted the fundamental principles of UNFCCC. The delegation proposed that IMO should not deliberate on any mandatory application of measures to reduce GHG emissions from ships until the issue was further deliberated under UNFCCC.

6.42 The Committee considered document MEPC 62/6/15 by Argentina, Brazil, Chile, China, Ecuador, India, Nicaragua, Peru, the Philippines, South Africa and Venezuela, which argued that the draft amendments circulated at the request of nine Parties to MARPOL Annex VI by Circular letter No.3128 had not been circulated in line with the basic amendment procedure of MARPOL as the Circular letter had been circulated without prior approval by the Committee of the proposed amendments contained therein. The co-sponsors noted that all amendments to the MARPOL Convention so far had first been approved in accordance with article 16(2)(b) and questioned why the Organization, at this particular instance, decided to apply the provisions of articles 16(2)(b) and 16(2)(d) on adoption at the same session of the Committee. Further, the co-sponsors considered that only article 16(2)(b) should be applied at this stage to ensure consistency with the customary procedure of IMO.

6.43 In response to document MEPC 62/6/15, the Legal Office of the IMO Secretariat clarified the procedure for amendments to MARPOL Annex VI as set out in article 16(2) paragraphs (a) to (d) of MARPOL and noted that the "approval" stage was not a formal procedural step under article 16 but only a customary practice which, however, was not

consistent throughout the Organization. It was further clarified that under article 16(2) any Party may propose an amendment and the Secretary-General was required – without the exercise of discretion – to circulate that amendment for consideration by the appropriate body of the Organization. Therefore, the Legal Office was of the view that no step of procedural or legal nature had been neglected and Circular letter No.3128 consequently fully complied with the terms of the MARPOL Convention.

6.44 Regarding the differences between the proposed amendments as prepared by the Working Group at MEPC 61 and the version circulated by Circular letter No.3128 and submitted to the Committee in document MEPC 62/6/3, the Legal Office noted that the circulated and submitted version was only a reformatted version of that developed by the MEPC 61 Working Group and that, as explained in document MEPC 62/6/5, the modifications were only made to enable the draft text to fit with the current version of MARPOL Annex VI. Further, the changes were of a minor editorial nature and did not result in a new set of amendments from those developed by the Working Group at MEPC 61. Consequently, this did not constitute suitable grounds for preventing the Committee from considering the proposals with a view to their adoption.

6.45 Concerning the consideration (article 16(2)(b)) and adoption (article 16(2)(d)) of the proposed amendments at the same session of the Committee, the Legal Office noted that the Committee's right to consider the proposed amendments had not been curtailed. The Committee had to, as a practical and legal matter, take up the proposal for 'consideration' before it could move to a position where the adoption procedure could take place under article 16(2)(d).

6.46 The delegation of Brazil, supported by others, recognized the right of a Party to MARPOL Annex VI to submit any proposal for amendments to the Convention, for consideration by the appropriate body of the Organization, but questioned the intended course of action to approve and adopt the proposed amendments in one single session of the Committee. As requested, the full statement is set out in annex 17.

6.47 The Legal Office clarified that it was only a common practice but not a legal rule that proposed amendments to MARPOL were considered and adopted at different sessions of the Committee and referred to a precedent within the Marine Environment Protection Committee. The Secretariat further informed of similar precedents within the Facilitation and Legal Committees.

6.48 The delegation of China raised further questions to the Legal Office for clarification on the appropriateness of the proposed amendments properly belonging in the framework of MARPOL Annex VI and on the meaning of "the Organization" in article 16(2)(b).

6.49 In reply to the first question by the delegation of China, the Legal Office referred the Committee to article 16(7) of the MARPOL Convention, which sets out a two-part test to assess the appropriateness of a proposed amendment and concluded that both parts of the test were satisfied in this instance. On the second point, the Legal Office was of the view that "the Organization" meant the IMO Secretariat as only the IMO Secretariat could circulate proposed amendments. The Secretary-General shed further light on the latter issue, noting that the meaning of paragraph (b) could be confusing due to the fact that, at the time of drafting paragraph (b), MEPC had yet to be established. In the equivalent amendment provisions under the SOLAS Convention, which had been drafted *after* MSC had been established, the requirement was for proposed and circulated amendments to be submitted to "the Maritime Safety Committee of the Organization for consideration" (SOLAS article VIII(b)(ii)). Accordingly, MARPOL article 16(2)(b) might, in light of the foregoing provision of SOLAS, be interpreted to mean that any amendment proposed and circulated shall be



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submitted to an appropriate IMO body, in this case MEPC, for consideration by the Member States of the Organization<sup>\*</sup>.

6.50 The Committee noted an intervention by the delegation of Norway where it referred to further examples of proposed amendments to IMO instruments that had been circulated without prior approval.

6.51 A number of delegations concurred with the findings of the Legal Office that the proposed amendments had been circulated in accordance with the amendment procedure and were in favour of considering the proposed amendments further.

6.52 Some other delegations did not share the legal opinion given by the Legal Office and expressed concerns about the proposed amendments being insufficiently mature, not reflecting the CBDR principle, which should be adhered to in all actions to address climate change, and about the legitimacy, though not the legality, of not following the customary procedure.

6.53 Following a lengthy debate, the Committee agreed by majority that the circulation of the proposed amendments to MARPOL Annex VI had been conducted in accordance with the provisions of the MARPOL Convention.

6.54 A number of delegations made statements on the circulation of the draft proposed amendments. As requested, the statements are also set out in annex 17.

#### **Discussion of the amendments to MARPOL Annex VI**

6.55 Noting that an informal group convened by the Chairman was holding consultations with a view to seeking consensus among Member States on the proposed energy efficiency regulations, and that the Committee had yet to decide on the possible establishment of working and/or drafting groups under agenda items 5 and 6, the Committee considered:

- .1 the proposed draft amendments to MARPOL Annex VI to include regulations on energy efficiency for ships, as set out in document MEPC 62/6/3 by the Secretariat;
- .2 some explanations to the proposed amendments set out in document MEPC 62/6/3, as presented in document MEPC 62/6/5 by Australia, Belgium, Canada, Denmark, Germany, Japan, Liberia, Norway and the United Kingdom; and
- .3 a set of draft MEPC resolutions proposed by Japan and the Marshall Islands in document MEPC 62/6/7 that were intended to further clarify the purposes of the draft amendments to Annex VI on energy efficiency for ships, strengthen the implementation of the new regulations, and expedite future work relating to energy efficiency measures. If acceptable, these additional resolutions could be adopted together with the amendments themselves.

6.56 The Committee noted that some delegations could not support further consideration of the proposed draft amendments in their current format.

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It may be noted that the Assembly, through resolution A.297(VIII), established MEPC and, through resolution A.296(VIII), designated "the Marine Environment Protection Committee as the appropriate body referred to in Article 16 of the Convention ..." (i.e. the MARPOL Convention).

6.57 The delegation of Sweden made a statement in which it thanked Japan and the Marshall Islands for their submission MEPC 62/6/7 and supported the adoption of the annexed draft resolutions as well as preparing additional text. As requested, the statement is set out in annex 18.

### **Application of the proposed energy efficiency regulations**

6.58 The Committee recalled that at MEPC 61 a number of delegations had expressed the view that the energy efficiency regulations could be phased-in for ships built in some countries over a certain period of time (MEPC 61/24, paragraph 5.47). It was also recalled that the Committee, under agenda item 5, had agreed to consider the proposal by China, Saudi Arabia and South Africa in relation to a phase-in of application of the proposed draft regulations for developing countries, as set out in document MEPC 62/5/10, paragraph 14.

6.59 The Committee noted that the latter proponents desired that the draft regulatory text should fully reflect the views put forward by developing country delegations at MEPC 61.

6.60 In this context, the Committee also considered document MEPC 62/6/21 by Singapore, proposing some refinements to the draft regulations in document MEPC 62/6/3, intended as a compromise solution.

6.61 A large number of delegations supported the compromise proposal by Singapore and expressed interest in further consideration of how it could be incorporated in the draft regulatory text. Most delegations taking the floor on the matter welcomed the proposal as a good basis for finding a compromise that could be agreed by consensus and expressed willingness to engage in further discussions. A number of delegations expressed concerns over the proposed possibility for port States to deny ships port entry based on whether they comply with the EEDI or not. Also, a number of delegations reasoned that the time period of four years was excessive and should be shortened, in particular if the port entry condition clause was not included. Other delegations argued that the four years period was too short and should be extended to seven or eight years, while still others argued that the time period for which a waiver could be issued should be set by each individual Party.

6.62 The Committee agreed that the proposal by Singapore provided scope for a compromise agreement as it contained elements around which a consensus could be built. However, many delegations considered that some elements could not be considered for inclusion as part of a final compromise package. Accordingly, the Committee also agreed to continue working on the compromise text in the informal group convened by the MEPC Chairman with a view to reaching consensus on the regulatory text.

### **Capacity building, technical assistance and transfer of technology**

6.63 The Committee recalled that at MEPC 61 a number of delegations had expressed the view that text on capacity building and transfer of technology should be included in the energy efficiency regulations. Consequently, the Committee noted several proposals in relation to this matter, in documents submitted to the session and proposed from the floor.

6.64 The Committee agreed that capacity building, technical assistance and transfer of technology were important elements in a future comprehensive regulatory framework to promote energy efficiency in international shipping. It agreed to continue considering the issue in relation with further development and refinement of the draft regulatory text and associated resolutions.

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## Review provision for the status of technological developments

6.65 The Committee recalled that draft regulation 21.5 of the proposed amendments to MARPOL Annex VI provided for a review provision at the beginning of phase 1, stipulating that the Organization "shall review the status of technological developments and, if proven necessary, adjust the time periods and reduction rates set out in Phases 2 and 3."

6.66 The Committee considered several, interrelated proposals concerning review provisions, as follows:

- .1 the proposal by Japan and the Marshall Islands in annex 2 to document MEPC 62/6/7 which would mandate that the first review process related to Phase 1 should start at the time of adoption of the amendments and should focus on small ships and ships designed for routes that call at ports that are remote, isolated or without the facilities comparable to those in developed nations;
- .2 the proposal by the Netherlands related to review process 1, regarding consideration of the applicable requirements for the small ship segment (MEPC 62/6/14). The proposal encouraged industry organizations to submit proposals (as review process 1) to resolve the high scatter and the low square of the regression factor R2 for this segment, which could form part of the proposed work plan and schedule for technical and operational measures for ships, as proposed in document MEPC 62/5/18; and
- .3 the ICS comments seeking to ensure that, during the later phases of application, due account should be taken of experience gained during earlier phases and proposing to include an additional review at the midpoint of Phase 2 on the requirements for Phase 3 (MEPC 62/6/24).

6.67 The Committee noted that Vanuatu considered that the scope of the review process was not broad enough to ameliorate some of the concerns expressed in the shipping community about the proposed calculation method(s) and not just the timing of the phases or the reduction rates (MEPC 62/6/23).

## Issues related to specific ship types

6.68 The Committee considered comments and proposals on the draft regulations for specific ship types, as shown in paragraphs 6.69 to 6.78 below.

### *Bulk carriers, tankers and container ships*

6.69 With regard to this category of ships, the Committee considered:

- .1 a proposal by China to reduce the reduction requirements for bulk carriers and tankers and separate them in three size categories, compared to the current two with smaller reductions for the largest and smallest ships (MEPC 62/6/16); and
- .2 a proposal by Greece to reduce the EEDI reduction factors "X" for tankers and bulk carriers (paragraphs 8, 9.1 and 9.3), especially those of larger sizes, and increase the EEDI reduction factors for large container ships (paragraphs 8 and 9.3), using available statistical analyses and results of relevant studies (MEPC 62/6/19).

6.70 The Committee noted that the review provision in the draft amendments would enable further consideration of issues, including ship safety, and proposals to amend Table 1 of the draft amendments provided in the documents and, as such, Table 1 should not be amended at this stage. The Committee agreed that the above proposals would be included in the review process (review process 1).

### ***General cargo ships***

6.71 The Committee noted the concerns and proposals by CESA regarding the large scatter and poor correlation of the reference line values for general cargo ships due to the inclusion of highly specialized tonnage under the definition of general cargo ships (MEPC 62/6/12, paragraphs 3 to 7, 9 and 10 and MEPC 62/INF.17).

6.72 The Committee reconfirmed that specialized tonnage should be excluded from the application of the EEDI.

### ***Chemical tankers***

6.73 The Committee considered a proposal by IPTA to introduce a cubic capacity correction factor for chemical tankers, due to their particular design features into the EEDI formula. This would reflect concerns in relation to chemical/parcel tankers that were similar to those expressed for combination carriers, namely, that specific design features could lead to these ships being penalized under the current EEDI formula (MEPC 62/6/13).

6.74 The Committee noted that a correction factor for chemical tankers would be incorporated into the calculation guidelines and so agreed to forward document MEPC 62/6/13 (IPTA) to the Working Group established under agenda item 5 with a view to considering inclusion of a correction factor for chemical tankers in the guidelines.

### ***Gas carriers***

6.75 The Committee considered the proposal by SIGTTO in document MEPC 62/6/20 that gas carriers should be divided into two specific categories when calculating the EEDI, as follows:

- .1 ships which utilize conventional liquid fuels (HFO, MDO etc.) as primary fuel. This category should cover all LPG and LNG ships and those LNG ships which employ slow speed diesel propulsion systems running on HFO; and
- .2 ships which use boil-off gas and/or vaporized LNG as primary fuel. This category should be based on the reference line derived from the analysis of Dual Fuel Diesel Electric (DFDE) vessels, in the capacity range of 75,000 – 95,000 dwt (MEPC 62/6/20).

6.76 The Committee noted that the review provision in the draft amendments would enable further consideration of the issues raised by SIGTTO. The Committee agreed to forward document MEPC 62/6/20 to the Working Group for consideration of gas carriers when considering the EEDI calculation method for ships having diesel-electric propulsion, turbine propulsion, hybrid propulsion, dual fuel engines and other propulsion systems as part of the draft work plan.

### ***Ro-ro ships***

6.77 The Committee considered the proposal by CESA to either amend or delete draft regulations 2.34 and 2.35 that provide definitions for ro-ro ships (MEPC 62/6/12, paragraph 8 and MEPC 62/INF.17).

6.78 The Committee agreed to amend the references to ro-ro ships within the draft regulatory text and instructed the Drafting Group, should it be established, accordingly.

### **Drafting issues**

6.79 The Committee agreed that the documents listed below were to be considered directly by the Drafting Group, should it be established:

- .1 MEPC 62/6/5 (Australia, Belgium, Canada, Denmark, Germany, Japan Liberia, Norway and United Kingdom) – Proposed draft amendments to MARPOL Annex VI; and
- .2 MEPC 62/6/26 (Germany) – Rectification of drafting omissions of draft amendments to regulations on energy efficiency for ships of MARPOL Annex VI (EEDI).

### **Establishment of groups**

6.80 Having completed its preliminary consideration of Part II of agenda item 6, the Committee then debated the establishment of working and/or drafting groups on energy efficiency matters. In this regard, a number of delegations continued to express the view, as also reported under agenda items 1 and 5 (see paragraphs 1.7-1.11, 5.5 and 5.28-5.29), that the proposed draft amendments should be considered by a working group with a view to their further development and possible approval at this session. In their view, the draft amendments were premature and needed considerable further work before they could be considered for adoption. Some delegations reasoned that adoption should not be considered before all supporting guidelines were also ready for adoption so they could be considered as a package. Other delegations argued that Part II of agenda item 62 should not be addressed at this session.

6.81 A number of other delegations maintained the view that the Drafting Group should consider the circulated draft amendments as well as documents providing comments or further proposals for refinement and additions.

6.82 The Committee agreed by majority that the circulated draft amendments and related documents should be considered by a Drafting Group (Part II), for editorial refinement of the regulatory text on energy efficiency and with a view to adoption at this session, while further consultations aimed at achieving consensus should continue in the informal group convened by the Chairman. Further, the Committee also agreed to establish a Working Group, under agenda item 5, on Energy Efficiency Measures for Ships (see paragraph 5.30).

### **Work of the Drafting Group on amendments to mandatory instruments (Part II) – first part**

6.83 The Committee agreed to refer the aforementioned drafting work to the Drafting Group on amendments to mandatory instruments (Part II), under the chairmanship of Dr. Phillip Belcher (Bahamas), with the following Terms of Reference:

- .1 review and finalize the specific paragraphs of document MEPC 62/6/3 referenced in documents MEPC 62/6/5, MEPC 62/6/12 and MEPC 62/6/26 referred to it by the plenary for the proposed amendments to MARPOL Annex VI (inclusion of regulations on energy efficiency for ships); and
- .2 submit a written report to plenary on Friday, 15 July 2011.

**Action taken on the report of the Drafting Group (Part II) – first part**

6.84 As instructed by the Committee the Drafting Group submitted its first report as document MEPC 62/WP.11/Add.1.

6.85 The Committee noted that the Drafting Group had worked strictly in compliance with its Terms of Reference and that the specific paragraphs referred to it by the plenary had been finalized, as detailed in the annex to document MEPC 62/WP.11/Add.1, and further noted that the Group did not work on any other issues which had not been referred to it.

6.86 The Committee noted that, with respect to the editorial amendments proposed in document MEPC 62/6/26 (Germany), the Group had identified some consequential amendments to the definitions. Accordingly, the Group finalized the definitions. Similarly, when reviewing the issue of major conversions, a consequential minor amendment was identified within regulation 5. The Group agreed to this minor editorial change.

6.87 The Committee noted that two issues relating to document MEPC 62/6/5 (Australia *et al.*) were highlighted:

- .1 in relation to issue 14 Equivalence, the Group was of the view that there was no need for a direct reference to be made to regulation 21 as regulation 4 implicitly allowed for such equivalences, to the extent applicable; and
- .2 with regard to issue 15 Clarification of the term "substantially", the Group believed that it did not have enough guidance from the plenary for it to progress this item.

6.88 Having received and considered document MEPC 62/WP.11/Add.1 the Committee approved it in general.

6.89 The Committee recalled that the informal group convened by the Chairman was continuing its efforts to build consensus on energy efficiency matters and was developing further text on capacity-building and technology transfer in order to reach a general agreement on the draft amendments to MARPOL Annex VI on inclusion of a new chapter 4 on energy efficiency for ships.

**Informal group on consideration and adoption of amendments to mandatory instruments**

6.90 The Committee noted that the outcome of the informal group was submitted by the Chairman for consideration by the Committee in document MEPC 62/WP.16, which provided amended text for a draft regulation on technical co-operation and transfer of technology, and draft text on application with possible deferment for parties which may require additional time for implementation of the proposed energy efficiency measures.

6.91 All delegations that intervened in the ensuing debate expressed their admiration for the Chairman's strenuous efforts to bring all Members together and produce a text on the basis of which consensus might be reached. In this respect, while some delegations considered that additional amendments and clarifications were required before adoption of the proposed text could be further considered, other delegations were of the view that the text presented by the Chairman was the most delicate of compromises and should be considered as the final text for adoption.

6.92 The Secretary-General congratulated the Chairman and delegations for their hard work and statesmanlike attitude in drafting the text in document MEPC 62/WP.16. Recalling his opening remarks appealing to all Members to compromise, and noting that every word, phrase, sentence and paragraph of the proposed text had been carefully crafted on the basis of concessions made by all engaged in the consultations, he commended the text to the Committee as it represented a well-balanced outcome that was workable in today's shipping reality and which also preserved the universality of IMO's regulations and the unity of its membership.

6.93 In turn, the Chairman thanked the Committee for its trust in his leadership on the issue and highlighted that the text on capacity-building had been based on corresponding regulatory text existing in other IMO conventions, which had nevertheless been improved and strengthened, while the text on application had been based on the proposal of Singapore (MEPC 62/6/21) but without the wording on denial of entry. He, therefore, also commended the text to Members while further consultations continued on related matters.

6.94 The Committee agreed by majority that the draft text provided in document MEPC 62/WP.16 should be considered further by the Drafting Group and that work in the informal group convened by the Chairman should continue with a view to developing a draft MEPC resolution on capacity-building, technical assistance and transfer of technology, which could be adopted together with the amendments as a package.

#### **Establishment of and Terms of Reference for the Drafting Group on Amendments to Mandatory Instruments (Part II) – second part**

6.95 Having considered document MEPC 62/WP.16 the Committee agreed to refer the aforementioned text to the Drafting Group on amendments to mandatory instruments (Part II), again under the chairmanship of Dr. Phillip Belcher (Bahamas), with the following Terms of Reference:

"using MEPC 62/WP.11/Add.1 as a basis, make the following changes:

- .1 include the issues raised by Vanuatu in document MEPC 62/6/23 and ICS in document MEPC 62/6/24 on the review period;
- .2 delete the insertion made in MEPC 62/WP.11/Add.1 in draft regulation 19.4 as proposed in document MEPC 62/6/12 by CESA; and
- .3 insert the paragraphs of MEPC 62/WP.16 into the draft proposed amendments set out in the annex to MEPC 62/WP.11/Add.1."

#### ***Action taken on the report of the Drafting Group (Part II) – second part***

6.96 As instructed by the Committee, the Drafting Group submitted the second, consolidated, part of its report as document MEPC 62/WP.11/Add.1/Rev.1.

6.97 The Committee noted that the Group had been working strictly in compliance with its Terms of Reference and had finalized the specific paragraphs referred to it by the plenary, as detailed in the annex to document MEPC 62/WP.11/Add.1/Rev.1, and further noted that the Group did not address any other issues which had not been referred to it.

6.98 The Committee noted that the group, having discussed the text contained within document MEPC 62/WP.11/Add.1, agreed that no changes should be made to how the phased dates (on or after X years and X months) are referenced in draft regulations 19.1, 19.2, 19.3

and 19.4, and further noted that the Secretariat should be requested to amend the text by inserting a calendar date at a later stage.

***Outcome of informal group on a draft resolution on capacity-building and technical assistance***

6.99 The Chairman presented orally the outcome of the work of the informal group undertaken on Friday, 15 July on developing a draft MEPC resolution on capacity building, technical assistance and transfer of technology. He stated that good progress was made but that it had not been possible to finalize a draft resolution by consensus as there were several issues where divergence could not be overcome. The Committee noted that there was no time to continue considering the draft MEPC resolution at this session.

6.100 A number of delegations expressed disappointment over the lack of a final outcome on the draft MEPC resolution and argued that, without a complete package, they opposed to continue consideration of the draft amendments.

6.101 The Committee noted that the Chairman would further develop the draft MEPC resolution on capacity building, technical assistance and transfer of technology based on input from delegations during this session and would submit it, with a view to further consideration and final adoption, at MEPC 63.

**Adoption of the draft amendments to MARPOL Annex VI on inclusion of a new chapter 4 on energy efficiency of ships**

6.102 Having considered the second part of the report of the Drafting Group set out in document MEPC 62/WP.11/Add.1/Rev.1, the Committee considered whether the proposed draft amendments should be adopted at this session.

6.103 The overwhelming majority of the delegations taking the floor on the issue supported adoption, at this session, of the text set out in the annex to MEPC 62/WP.11/Add.1/Rev.1 as they argued that the measures had been under development for several years and were well matured both as technical regulations and as regulatory text. However, a number of delegations opposed adoption at this session as the draft MEPC resolution on capacity building, technical assistance and transfer of technology was not ready for adoption and argued that work should continue with a view to reaching consensus on a total package.

6.104 A number of delegations wanted to continue consideration of the draft text in the Drafting Group as they wanted to see a link between the deferment clause in subparagraphs 4 to 6 of regulation 19 and the capacity building regulations set out in draft regulation 23. Other delegations supported the amendments but reasoned that they should not be adopted at this session but be considered further at MEPC 63, with a view to adoption at that session together with the MEPC resolution on capacity building and the associated guidelines.

6.105 One delegation expressed the view that the amendments should be forwarded to the Subsidiary Body for Technological and Scientific Advice of the UNFCCC for its review and input prior to further consideration by the Committee.

6.106 Some delegations were of the view that the proposed draft amendments still did not reflect sufficiently the concerns of developing countries, specifically in relation to technology transfer and the principle of Common But Differentiated Responsibilities **and Respective Capabilities** (CBDR), and so should not be adopted at this session to enable further consideration at MEPC 63. However, many other delegations were of the view that IMO, as a sovereign body, should be respected. The proposed draft amendments reflected,



in their view, a delicate compromise of the views of both sides that following additional drafting amendments made during the session, it reflected the concerns expressed by most delegations, including those of developing countries, and should be adopted at this session.

6.107 Following an extensive discussion, the Chairman invited the Committee to adopt the draft amendments to MARPOL Annex VI to include regulations on energy efficiency for ships as contained in annex to document MEPC 62/WP.11/Add.1/Rev.1.

6.108 The majority of delegations that responded to the Chairman's invitation supported adoption. However, the delegation of Saudi Arabia requested that a vote be held on adoption of the aforementioned draft amendments and the delegation of Brazil requested that, in accordance with Rule 29 of the Rules of Procedure of the Marine Environment Protection Committee, the vote be undertaken by a roll-call.

6.109 The Chairman confirmed that only Parties to MARPOL Annex VI attending MEPC 62 were eligible to vote. The IMO Legal Office confirmed that 59 of the 64 Parties to MARPOL Annex VI were registered to attend MEPC 62. In accordance with Rule 29 of the Committee's Rules of Procedure, the Chairman drew by lot the name of Slovenia, which would be the first Party to vote, followed by other Parties in alphabetical order in English.

6.110 The Committee noted the outcome of the roll-call vote as follows:

**Yes: 49 Parties:** Antigua and Barbuda, Australia, Bahamas, Bangladesh, Belgium, Belize, Bulgaria, Canada, Cook Islands, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Ghana, Greece, Ireland, Italy, Japan, Kiribati, Latvia, Liberia, Lithuania, Luxembourg, Malaysia, Malta, Marshall Islands, Netherlands, Norway, Panama, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saint Kitts and Nevis, Samoa, Serbia, Singapore, Slovenia, Spain, Sweden, Tuvalu, Ukraine, United Kingdom, United States, Vanuatu

**No: 5 Parties:** Brazil, Chile, China, Kuwait, Saudi Arabia

**Abstain: 2 Parties:** Jamaica, Saint Vincent and the Grenadines

**Not present in the room: 3 Parties:** Iran (Islamic Republic of), Kenya, Syrian Arab Republic

6.111 As a consequence, the Chairman declared that the Committee had formally adopted the amendments to MARPOL Annex VI incorporating, within that Annex, a new chapter 4 on regulation on energy efficiency for ships.

6.112 The Committee requested the Secretariat to undertake an editorial review of the amendments, incorporate any conforming changes that may be necessary and complete the text based on the outcome of the Drafting Group and relevant decisions by the Committee.

6.113 Having previously considered the draft resolution given in the annex to document MEPC 62/6/3, and noting an intervention by the delegation of China, the Committee agreed to adopt the amendments using the draft resolution given in annex 1 to document MEPC 62/6/7 (Japan and Marshall Islands). In this respect, the Chairman reiterated his commitment to develop for the next session a draft MEPC resolution on technology transfer and the development of alternative technologies to enable all Member States to meet the challenge of climate change.

6.114 The amendments to MARPOL Annex VI, as adopted by the Committee through resolution MEPC.203(62), are set out in annex 19.

6.115 A number of delegations made statements following adoption of the amendments, noting the view that, among other matters, the principle of CBDR should be reflected in all actions taken to combat climate change. The observers of the Pacific Environment and the Clean Shipping Coalition also made statements. As requested, the statements are set out in annex 20.

6.116 The Committee also requested the Secretariat to finalize the draft guidelines for calculation of reference lines for use with the Energy Efficiency Design Index (MEPC 62/6/4, annex 2) and submit them to MEPC 63 with a view to their final adoption.

6.117 The Committee expressed its appreciation to Mr. Zafrul Alam (Singapore) and Dr. Phillip Belcher (Bahamas) for their leadership and excellent work, and to the members of the Drafting Group for the meticulous work done.

## **7 INTERPRETATIONS OF, AND AMENDMENTS TO, MARPOL AND RELATED INSTRUMENTS**

7.1 The Committee noted that 13 documents had been submitted under this agenda item.

7.2 The Committee also noted that documents MEPC 62/7/6 (IACS), MEPC 62/7/7 (Russian Federation) and MEPC 62/7/8 (IACS), dealing with matters related to MARPOL Annex VI, had been considered under agenda item 4 – Prevention of air pollution from ships; and that document MEPC 62/7/5 (IACS), concerning a perceived incoherency in MARPOL Annex IV, had been considered under agenda item 6 – Consideration and adoption of amendments to mandatory instruments.

### **PROPOSED AMENDMENTS TO MARPOL ANNEXES I, II, IV, V AND VI ON REGIONAL ARRANGEMENTS FOR RECEPTION FACILITIES**

7.3 The Committee recalled that MEPC 60, having considered documents MEPC 60/6/4 (Australia and SPREP) proposing amendments to MARPOL Annexes I and II and MEPC 60/6/12 (United States) commenting on the former, had encouraged interested delegations and observers to resolve the outstanding issues and submit a joint document with draft amendments to MARPOL Annexes I, II, IV, V and VI, institutionalizing regional arrangements for reception facilities and draft guidelines for establishing those arrangements. The Committee further recalled that MEPC 60 had acknowledged that any regional arrangements were intended only for specific regions of the world, especially Small Island Developing States, and that this understanding should be clearly stated in the draft amendments or guidelines.

7.4 The Committee considered document MEPC 62/7 (Australia and SPREP) proposing amendments to MARPOL Annexes I, II, IV, V and VI to allow Small Island Developing States to satisfy MARPOL's requirements for port reception facilities through regional arrangements, together with draft Guidelines for the development of a Regional Reception Facilities Plan, including provisions for their adoption by the MEPC.

7.5 The Committee noted that the United States, in document MEPC 62/7/10, reiterated its support for the concept of regional arrangements for port reception facilities, which should be institutionalized within each of the pertinent MARPOL Annexes. However, the United States was of the view that the concept should not be restricted to Small Island Developing States

but that all States should be eligible to enter into a regional arrangement on the basis of circumstances of practical difficulty. The United States believed that IMO should not undertake to approve or disapprove regional arrangements and that the preferred alternative is a required notification to IMO by the States in the region when they have taken into account the guidance of the Organization and are prepared to implement the regional arrangement.

7.6 A large number of delegations supported the proposal by Australia and SPREP, while a number of other delegations shared the view of the United States that all States should be eligible to enter into a regional arrangement on the basis of circumstances of practical difficulty. Some delegations expressed concerns on practical difficulties that ships may face, including a possible need for deviation from their commercial route; and that MARPOL Annex II pre-wash requirements at the port of unloading was not adequately addressed in the proposed amendments.

7.7 After discussion, the Committee approved draft amendments to MARPOL Annexes I, II, IV, V and VI on regional arrangements for port reception facilities, set out in annex 21, for circulation, with a view to adoption at MEPC 63.

7.8 Recognizing that the approved amendments to Annex V refer to the existing text of Annex V, the Committee instructed the Secretariat to make necessary adjustments for the approved amendments to fit in the newly adopted revised Annex V.

7.9 The delegation of the United States reserved its position with regard to the Committee's decision to circulate the proposed amendments, and with respect to their limitation to Small Island Developing States.

7.10 The Committee invited Australia and other interested delegations to continue the work on the proposed Guidelines for developing a Regional Reception Facilities Plan and submit a revised version of the Guidelines to MEPC 63, with a view to adoption.

7.11 Following a suggestion by the delegation of Bahamas, the Committee invited the interested delegations and Secretariat to provide information to MEPC 63 on the administrative burdens, as well as any other economic impact, deriving from these proposed amendments, taking into account the outcome of C 105 in this respect.

#### **DEVELOPMENT OF ASSOCIATED GUIDELINES TO THE REVISED MARPOL ANNEX V**

7.12 The Committee recalled that MEPC 61, having approved draft amendments to MARPOL Annex V with a view to adoption at MEPC 62, had established an intersessional Correspondence Group under the coordination of the United Kingdom to initiate a review of the Guidelines for the implementation of Annex V of MARPOL and the Guidelines for the development of garbage management plans.

7.13 The delegation of the United Kingdom, as coordinator of the Correspondence Group, introduced document MEPC 62/7/1 on the outcome of the Group's work in the intersessional period. The Committee noted that the Group had made significant progress in reviewing the Guidelines and had identified several issues requiring further consideration, as listed in paragraphs 11 to 18 of document MEPC 62/7/1.

7.14 The Committee also considered document MEPC 62/7/2 (Australia) providing a draft text, addressing the disposal of animal carcasses at sea, to be incorporated as part of the revised Guidelines for the implementation of MARPOL Annex V.

7.15 The Committee agreed to re-establish the Correspondence Group, under the coordination of the United Kingdom<sup>3</sup>, with the following Terms of Reference:

- .1 further develop the draft revised Guidelines for the implementation of the revised MARPOL Annex V, taking into account the discussions and comments made in the plenary;
- .2 further develop the draft revised Guidelines for the development of garbage management plans to be part of the revised Guidelines for the implementation of the revised MARPOL Annex V; and
- .3 submit a written report to MEPC 63.

7.16 Following a suggestion by the delegation of the Netherlands, the Committee instructed the DSC Sub-Committee to consider the issue of discharging of cargo residues, as referred to in regulation 4.1.3 of the revised MARPOL Annex V, and in particular what constitutes harmful to the marine environment, under a new output for the 2012-2013 biennium "Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V", with a target completion year of 2012. The Committee noted the intention of the delegation of the Netherlands to submit a relevant document to the Sub-Committee.

7.17 In this connection, the Committee also instructed the BLG Sub-Committee to consider the issue of discharge of cleaning agents or additives in deck washing water, as referred to in regulations 4.2 and 6.2 of the revised MARPOL Annex V, and advise it accordingly.

## **MATTERS RELATED TO MARPOL ANNEX I**

### **Regulation 12 of MARPOL Annex I and its associated unified interpretations**

7.18 The Committee considered document MEPC 62/7/3 (Hong Kong, China and IACS), seeking clarification on the scope of application of regulation 12 of MARPOL Annex I as amended by resolution MEPC.187(59) and the associated MARPOL Unified Interpretations (UIs) contained in document MEPC 61/24, annex 14.

7.19 The Committee noted the view of the co-sponsors that the most significant revision of regulation 12 of MARPOL Annex I and the associated UIs, from the perspective of system design, was that it no longer contains the provision (first sentence of the "past" MARPOL UI 17.1.3) to allow for an interconnection between the sludge tank discharge piping and bilge-water piping using common piping leading to the standard discharge connection. The co-sponsors further pointed out that this unintentional omission would require ships to have completely separate standard discharge connections and piping leading to that connection.

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<sup>3</sup>

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7.20 Following discussion, the Committee agreed that regulation 12.2.2 of MARPOL Annex I should not be retroactively applied to ships delivered before 1 January 2014\* (see note in subparagraph 2), and to the following amendments to the Unified Interpretations to regulations 12.2, 12.3 and 12.4, as contained in document MEPC 61/24, annex 14, allowing for an interconnection between the sludge tank discharge piping and bilge-water piping using common piping leading to the standard discharge connection:

- .1 the existing Unified Interpretation to regulation 12.2 should read as an interpretation to regulation 12.2.1; and
- .2 a new Unified Interpretation to regulation 12.2.2 is added as follows:

**Regulation 12.2.2 – Sludge tank discharge piping**

There should be no interconnections between the sludge tank discharge piping and bilge-water piping other than possible common piping leading to the standard discharge connection referred to in regulation 13.

For ships delivered before 1 January 2014\*, existing arrangements where the oil residue (sludge) tank(s) have discharge connections to oily bilge water holding tank(s), tank top or oily water separator may be accepted.

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\* Ship delivered before 1 January 2014 means a ship:  
.1 for which the building contract is placed before 1 January 2011; or  
.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction before 1 January 2012; or  
.3 the delivery of which is before 1 January 2014.

7.21 The Committee instructed the Secretariat to issue MEPC.1/Circ.753 on the above revised Unified Interpretations.

7.22 The Committee, in endorsing the view of IACS that while the revised Unified Interpretation to regulation 12.2 could serve as interim guidance, options should be explored to formalize the interpretation, including possible amendments to regulation 12 of MARPOL Annex I, invited IACS and interested delegations to provide their considerations and comments to MEPC 63.

**Guidance for the recording of operations in the Oil Record Book Part I**

7.23 The Committee, having recalled that MEPC 61 had approved the "Guidance for the recording of operations in the Oil Record Book Part I – Machinery space operations (all ships)" (MEPC.1/Circ.736), considered and agreed to a number of minor corrections proposed by Denmark, *et al.* (MEPC 62/7/4) and India (MEPC 62/7/12, paragraph 3), and subsequently instructed the Secretariat to issue MEPC.1/Circ.736/Rev.1.

**Amendments to the Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers**

7.24 The Committee considered a proposal by the Russian Federation (MEPC 62/7/9) to delete all the references to "oil-like substances" in the "Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers" (resolution MEPC.108(49)). The delegation of the Russian Federation pointed out that, as a consequence of the entry into force of revised MARPOL Annex II, substances are no longer to be classified as "oil-like substances".

7.25 The delegation of the United Kingdom, supported by others, in concurring with the existence of inconsistencies in the Guidelines, nevertheless suggested that the BLG Sub-Committee should consider the issue further, in light of the newly approved MEPC.1/Circ.761 on Guidelines for the carriage of blends of petroleum oil and bio-fuels (paragraph 11.21.5).

7.26 Consequently, the Committee instructed the BLG Sub-Committee to consider the issue and advise it accordingly.

#### **PROPOSAL FOR CIRCULATION OF UNIFIED INTERPRETATIONS OF THE MARPOL CONVENTION**

7.27 The Committee, having considered the proposal by the Republic of Korea (MEPC 62/7/11), agreed that future Unified Interpretations (UIs) to regulations under MARPOL Annexes should be circulated by MEPC circulars, and as annexes to the Committee's reports, with a view to facilitating their dissemination. The Committee also instructed the Secretariat to issue MEPC.1/Circ.754 on the list of UIs of the MARPOL Convention adopted since MEPC 45, as contained in the annex to document MEPC 62/7/11.

### **8 IMPLEMENTATION OF THE OPRC CONVENTION AND THE OPRC-HNS PROTOCOL AND RELEVANT CONFERENCE RESOLUTIONS**

8.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012, with the exception of the Report of the twelfth meeting of the OPRC-HNS Technical Group (MEPC 62/WP.14).

#### **Report of the twelfth meeting of the OPRC-HNS Technical Group**

8.2 The Committee noted that the twelfth meeting of the OPRC-HNS Technical Group was held from 4 to 8 July 2011 under the chairmanship of Mr. Alexander von Buxhoeveden (Sweden), and that the report of the Group was issued under the symbol MEPC 62/WP.14.

8.3 The Committee approved the report in general and, in particular:

- .1 noted the progress made by the Group in updating the IMO dispersant guidelines;
- .2 noted the progress made by the Group on the Operational guidelines on sunken and submerged oil assessment and removal techniques;
- .3 endorsed the Group's view with regard to the topic of potentially polluting wrecks and its agreement to treat this subject independently from its work on the development of guidelines for sunken and submerged oil and to further assess the matter at TG 13;
- .4 invited Member States to submit information on wrecks of interest to future meetings of the Group;
- .5 noted the discussions on the safe operation and performance standards of oil pollution combating equipment (OPCE) and endorsed the Group's decision to confine this work to the safe operation of OPCE;

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- .6 endorsed the Group's participation in reviewing and updating the OPRC model training courses, levels 1 to 3, to be undertaken by the Secretariat, having recognized that the information contained therein is dated and the look and feel of the courses required modernization;
  - .7 continued to urge delegations to submit information on HNS pollution incidents to be included in the summary of incidents and to submit relevant information to further expand the inventory of information resources on OPRC/HNS-related matters;
  - .8 noted the Secretariat's ongoing support to the Triennial Oil Spill Conference Series;
  - .9 noted the actions taken by the IMO Secretariat, in collaboration with other UN agencies, in responding to the Fukushima Daiichi Nuclear Facility incident in the aftermath of the recent tsunami in Japan, in accordance with the provisions of the Joint Radiation Emergency Management Plan of the International Organizations (JPlan);
  - .10 endorsed the Group's intention to postpone its work on oil spill response in ice and snow, in light of similar work being undertaken by the petroleum industry, in order to benefit from that work and avoid duplication of effort;
  - .11 noted the preliminary results of the prioritization exercise for items of high-priority work related to HNS and oil and concurred with the Group's proposal to analyse the information in more depth, with a view to providing a more comprehensive assessment at MEPC 64;
  - .12 approved the planned outputs and provisional agenda of the thirteenth meeting of the OPRC-HNS Technical Group and the exceptional request to schedule that meeting during the week following MEPC 63, to allow delegations to participate in Interspill, the IMO-sponsored European oil spill conference that would take place the week following the proposed scheduling of TG 13; and
  - .13 welcomed the re-election of Mr. Alexander von Buxhoeveden (Sweden) as Chairman and Mr. Woo-Rack Suh (Republic of Korea) as Vice-Chairman of the OPRC-HNS Technical Group, both for the year 2012.

8.4 The Committee also noted the statement made by the International Spill Control Organization (ISCO) with regard to its efforts, at the general level, to improve oil spill response and, more specifically, as they related to the defence of those contractors involved in the **Deepwater Horizon** incident, and the invitation by ISCO to environmental NGOs to participate in this work.

## **9 IDENTIFICATION AND PROTECTION OF SPECIAL AREAS AND PARTICULARLY SENSITIVE SEA AREAS**

### **Designation of the Strait of Bonifacio as a Particularly Sensitive Sea Area (PSSA)**

9.1 The Committee recalled that MEPC 61 had approved, in principle, the Strait of Bonifacio PSSA, subject to a review by the PSSA Technical Group, which had been proposed by France and Italy, and had requested the NAV Sub-Committee to consider the Associated Protective Measures (APMs).

9.2 In considering document MEPC 62/9/1 (Secretariat), which reported on the outcome of NAV 57 on the matter, the Committee noted that the Sub-Committee had considered the information provided by the proponents in relation to the effective implementation date of the proposed APM and approved the proposed "Recommendation on navigation through the Strait of Bonifacio" as the APM for "the Strait of Bonifacio PSSA". The Committee also noted that the approval and implementation date of the APM for the PSSA, as set out in the annex of document MEPC 62/9/1, are subject to the decision of MSC 90 in May 2012.

9.3 The Committee, having considered the outcome of NAV 57, and the comments made in plenary, decided to establish an informal Technical Group on PSSAs to review the information provided and to advise the Committee for action as appropriate.

#### **Designation of the Saba Bank as a Particularly Sensitive Sea Area**

9.4 The Committee considered the proposal submitted by the Netherlands (MEPC 62/9) to designate the Saba Bank as a PSSA in accordance with the Revised PSSA Guidelines (resolution A.982(24)).

9.5 The delegation of the Netherlands, during introduction of its proposal, made the following points:

- .1 the proposed marine area to be designated lies entirely within the EEZ of the Caribbean island of Saba and aims to protect the fragile coral reef ecosystems, sea turtle foraging areas and important spawning and fishing grounds which currently suffer from international shipping that pass through the area. It is a unique and highly significant area for the entire Caribbean region being one of the largest atolls in the world, measuring 1,850 km<sup>2</sup> (above the 50 m depth contour); and
- .2 the proposal includes the establishment of two APMs within the PSSA, as follows:
  - .1 an "Area to be Avoided" for ships exceeding 300 GT aimed at reducing the risk of collisions with fishing boats, physical damage and pollution from groundings and operational and accidental discharges and the loss of so-called ghost traps; and
  - .2 a "mandatory no anchoring area", which would significantly prevent and reduce the destruction of living corals and other benthic organisms from merchant ships' anchors and chains.

9.6 The Committee, having noted that the two APMs were intended to prevent damage to the atoll ecosystem and its related ecosystems from merchant shipping activities, referred the proposal to the informal Technical Group for review and to advise the Committee on any action to be taken, as appropriate.

#### **Instructions to the informal Technical Group on PSSAs**

9.7 The Committee established the informal Technical Group, under the Chairmanship of Mr. Paul Nelson (Australia), and instructed it to:

- .1 review the proposal by France and Italy to designate the Strait of Bonifacio as a Particularly Sensitive Sea Area (MEPC 61/9; MEPC 61/INF.26 and MEPC 62/9/1)), taking into account comments from plenary, with a view to assessing whether it meets the provisions of the Revised PSSA Guidelines



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- (resolution A.982(24)) and whether all the information required by the Guidance Document for Submission of PSSA Proposals to IMO (MEPC.1/Circ.510) has been provided; if satisfied, prepare a draft MEPC resolution with a view to designating the "Strait of Bonifacio PSSA";
- .2 review the proposal by the Netherlands for the designation of the Saba Bank as a Particularly Sensitive Sea Area (MEPC 62/9) with a view to assessing whether it meets the provisions of the Revised PSSA Guidelines (resolution A.982(24)) and whether all the information required by the Guidance Document for Submission of PSSA Proposals to IMO (MEPC.1/Circ.510) has been provided; and advise the Committee on any action to be taken, as appropriate; and
  - .3 provide a written report, including recommendations, to plenary on Thursday, 14 July 2011.

### **Report of the informal Technical Group on PSSAs**

9.8 The Committee, having considered the report of the informal Technical Group (MEPC 62/WP.12), as introduced by its Chairman Mr. Paul Nelson (Australia), approved it in general and, in particular:

- .1 agreed that the proposal by France and Italy (MEPC 61/9, MEPC 61/INF.26, MEPC 62/9/1, NAV 57/3/8) met the requirements of the Revised PSSA Guidelines (resolution A.982(24)) and adopted resolution MEPC.204(62), as set out in annex 22 on the designation of the Strait of Bonifacio as a PSSA; and
- .2 agreed that the proposal by the Netherlands met the requirements of the Revised PSSA Guidelines (resolution A.982(24)) and approved, in principle, the designation of the Saba Bank as a PSSA; and noted that the Netherlands would submit detailed proposals for the APMs to the Sub-Committee on Safety of Navigation, which would provide recommendations to the Committee with a view to final designation of the PSSA at MEPC 64 in October 2012.

9.9 The Committee, having noted the Group's advice for submitting PSSA proposals in the future, reminded Member Governments that they should provide:

- .1 where appropriate, information about the ecological linkages between terrestrial species and ecosystems and the marine environment, as well as the threat posed to terrestrial species and ecosystems by shipping activities. This would enable the Technical Group to have a scientific basis to consider whether or not the criteria for the designation of PSSAs had been satisfied;
- .2 clear supporting documentation to establish that at least one of the criteria exists throughout the entire proposed area, though the same criterion need not be present throughout the entire area; and
- .3 supporting documents where the proposed area is deemed to be under threat from shipping activities due to hydrodynamic conditions (for example prevailing currents, wind direction). This scientific justification is crucial since the size and coverage of the PSSA would depend on the PSSA designation criteria being satisfied.

9.10 The Committee also reminded Member Governments that full details of the legal basis of any proposed APMs, whether or not the APMs relate to an existing IMO measure, should be provided in all proposals. In this regard, applications should identify the legal basis and should include information on the consistency of the APM with the legal instrument under which the APM is proposed.

9.11 The Committee emphasized the need to ensure that applications that identify a new APM must append a draft of the proposal that is to be submitted to the appropriate Sub-Committee or Committee.

9.12 The delegation of Singapore noted that some procedures in assessing the Strait of Bonifacio PSSA application did not follow the sequence as set out in the Revised Guidelines for the Identification and Designation of PSSAs and highlighted that the procedures in assessing the Strait of Bonifacio PSSA application should not be regarded as a precedent for future PSSA applications. Singapore also emphasized the principle that all PSSA applications must follow the guidelines and procedures that have been adopted by IMO. As requested, the statement of Singapore is set out in annex 23.

9.13 The Committee thanked Mr. Nelson (Australia) and the members of the Group for the excellent work they had carried out.

## **10 INADEQUACY OF RECEPTION FACILITIES**

10.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

## **11 REPORTS OF SUB-COMMITTEES**

### **Outcome of DE 54**

11.1 The Committee noted that the fifty-fourth session of the Sub-Committee on Ship Design and Equipment (DE 54) had been held from 25 to 29 October 2010 and its report on that session had been circulated under the symbol DE 54/23. The matters of interest to the Committee's work were set out in document MEPC 62/11 (Secretariat).

11.2 The Committee approved the report of DE 54 concerning the work of the MEPC in general and took action as indicated in the ensuing paragraphs.

### ***Interpretation on application of SOLAS, MARPOL and Load Line requirements for major conversions of oil tankers***

11.3 The Committee approved, following the concurrent decision taken by MSC 89 and endorsing the subsequent comments provided by NAV 57 concerning navigation bridge visibility (see paragraphs 11.37 and 11.38), the draft MSC-MEPC circular on Unified interpretations on the application of SOLAS, MARPOL and Load Line requirements to conversions of single-hull tankers to double-hull tankers or bulk carriers (DE 54/23, annex 4) and instructed the Secretariat to issue this as MSC-MEPC.2/Circ.10.

11.4 In relation to this circular, IACS proposed that as MSC.1/Circ.1284 contains interpretations of SOLAS regulations II-1/1.3 and II-1/3-6, which are now included in the new circular, MSC.1/Circ.1284 should be revoked. The Committee agreed with the principle to revoke MSC.1/Circ.1284 but noted that this matter needed to be referred back to the MSC for consideration.

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***Noise from commercial shipping and its adverse impacts on marine life***

11.5 The Committee noted the decision of DE 54 to postpone the consideration of the issue of noise from commercial shipping and its adverse impacts on marine life to DE 55. This had been necessary as the time interval from when MEPC 61 had referred the matter to DE 54 was rather short and delegations were therefore unable to consult with their experts in order to generate comments in time for DE 54.

***Test standards for type approval of add-on equipment***

11.6 The Committee adopted, by resolution MEPC.205(62), the 2011 Guidelines and specifications for add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment, as set out in annex 24 and endorsed the view of DE 54 that these Guidelines and specifications should not apply retroactively.

***Measures to promote Integrated Bilge Water Treatment Systems***

11.7 The Committee noted that DE 54 had decided to further consider the issue of promotion of integrated bilge water treatment systems (IBTS) at DE 55.

***Guidelines for a shipboard oil waste pollution prevention plan***

11.8 The Committee approved the draft MEPC circular on Guidelines for a shipboard oily waste pollution prevention plan (DE 54/23, annex 9) and instructed the Secretariat to issue this as MEPC.1/Circ.759.

***Manually operated alternatives in the event of pollution prevention equipment malfunctions***

11.9 In relation to the concerns raised at DE 54 regarding the juridical status, i.e. mandatory or recommendatory, of resolution MEPC.108(49) on Revised guidelines and specifications for oil discharge monitoring and control systems for oil tankers, the Committee, noting that a full evaluation of this topic was necessary, decided, due to time constraints, to postpone discussion on this item until its next session (MEPC 63).

11.10 Similarly, the Committee also decided to postpone discussions on the draft MEPC resolution (DE 54/23, annex 10) on Amendments to the Revised guidelines and specifications for oil discharge monitoring and control systems for oil tankers (resolution MEPC.108(49)) until MEPC 63.

***Completed work items***

11.11 The Committee, noted that the work on Test standards for type approval of add-on equipment and Guidelines for a shipboard oil waste pollution prevention plan, had now been completed and that, accordingly, these two items should be deleted from the work programme of the Sub-Committee. With respect to the work on Manually operated alternatives in the event of pollution prevention equipment malfunction, as noted in paragraphs 11.9 and 11.10, consideration of this item was deferred by the Committee until its next session.

***Outcome of DE 55***

11.12 The Committee noted that the fifty-fifth session of the Sub-Committee on Ship Design and Equipment (DE 55) had been held from 21 to 25 March 2011 and its report on that session had been circulated under the symbol DE 55/22. The matters of interest to the Committee's work were set out in documents MEPC 62/11/4 and MEPC 62/11/4/Add.1 (Secretariat).

11.13 The Committee approved the report of DE 55 concerning the work of the MEPC in general and took action as indicated in the ensuing paragraphs.

***Development of a mandatory code for ships operating in polar waters***

11.14 The Committee noted the decision of the Sub-Committee to develop an environmental protection chapter in the draft Polar Code. With respect to the decisions taken by the Sub-Committee with regard to various environmental aspects of the Code and also the consideration of documents MEPC 62/11/4/Add.1 and MEPC 62/11/6 relating to this item, the Committee decided, due to time constraints, to postpone discussions until its next session (MEPC 63).

***Protection against noise from commercial shipping and its adverse impact on marine life***

11.15 The Committee considered establishing a new output on the DE Sub-Committee's biennial agenda to develop technical guidelines to address the issue of noise from commercial shipping and its adverse impacts on marine life and noted the support for this action as presented in document MEPC 62/11/10 (United States). The Committee further noted that, on this issue, there is already a planned output for the Committee, set out in resolution A.1012(26) (see output 7.1.2.4). Accordingly, the Committee instructed the DE Sub-Committee to address this issue, which would remain active as a distinct item on the Committee's agenda.

***Measures to promote integrated bilge water treatment systems***

11.16 The Committee approved the draft amendments to the 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for IBTS (MEPC.1/Circ.642, as amended by MEPC.1/Circ.676) and the associated draft MEPC circular (DE 55/22, annex 16) and instructed the Secretariat to issue this as MEPC.1/Circ.760.

***Revision of resolution MEPC.159(55)***

11.17 The Committee noted the progress made on the revision of the Revised Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants (resolution MEPC.159(55)).

**Outcome of BLG 15**

11.18 The Committee noted that the Sub-Committee on Bulk Liquid and Gases (BLG 15) had held its fifteenth session from 7 to 11 February 2011 and its report on that session had been circulated under the symbol BLG 15/19. The matters of interest to the Committee's work were set out in document MEPC 62/11/2 (Secretariat).

11.19 The Committee also noted that, in line with normal practice, the outcome of BLG 15 on matters related to MARPOL Annex VI (paragraphs 2.18 to 2.24 of document MEPC 62/11/2) had been addressed under agenda item 4.

11.20 With respect to the remaining actions (reflected in paragraph 2 of document MEPC 62/11/2), which BLG 15 had requested the Committee to address, the Committee approved the report of BLG 15 in general and took action as indicated in the ensuing paragraphs.

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**Work related to the ESPH Working Group**

11.21 The Committee noted, as requested, the various actions taken by BLG 15 and, in particular:

- .1 approved in general the actions taken by the Sub-Committee following consideration of the report of ESPH 16;
- .2 endorsed, noting MSC 89's concurrent decision, the issuance of BLG.1/Circ.32 on Carriage conditions and special requirements assigned for Mixed C4, which will be included as a new entry into the IGC Code;
- .3 endorsed, noting MSC 89's concurrent decision, the issuance of BLG.1/Circ.33 on Decisions on the categorization and classification of products;
- .4 approved, noting MSC 89's concurrent decision, the timeline for the preparation of amendments to chapters 17, 18 and 19 of the IBC Code;
- .5 approved the 2011 Guidelines for the carriage of blends of petroleum oil and bio-fuels (BLG 15/19, annex 2) and instructed the Secretariat to issue this as MEPC.1/Circ.761 and agreed that the current interim guidance on the carriage of blends of petroleum oil and bio-fuels should remain in effect until 1 September 2011. Additionally, it was agreed that all bio-fuel/petroleum oil blends previously assessed under interim tripartite measures should now be reviewed by the ESPH Working Group with a view to checking their compliance with the new guidelines;
- .6 approved, noting MSC 89's concurrent decision, the holding of an intersessional meeting of the ESPH Working Group in 2012; and
- .7 deleted the item on Application of the requirements for the carriage of bio-fuels and bio-fuel blends from the agenda of BLG as the work had been completed.

11.22 The Committee also:

***Development of guidelines and other documents for uniform implementation of the 2004 BWM Convention***

- .1 adopted, by resolution MEPC.206(62), the Procedure for approving other methods of ballast water management in accordance with regulation B-3.7 of the BWM Convention, as set out in annex 25;
- .2 approved the Guidance on Scaling of ballast water management systems (BLG 15/19, annex 5) and instructed the Secretariat to issue this as BWM.2/Circ.33;
- .3 noted the progress made on the development of a draft BWM circular on Ballast water sampling and analysis;

***Development of international measures for minimizing the transfer of invasive aquatic species through bio-fouling of ships***

- .4 adopted, by resolution MEPC.207(62), the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species, as set out in annex 26;

***Biennial agenda and provisional agenda for BLG 16***

- .5 approved, noting MSC 89's concurrent decision, the biennial agenda of the Sub-Committee for the 2012-2013 biennium and the outputs to be placed on the Committee's own biennial agenda which are under the purview of the Sub-Committee (see also paragraph 20.8);
- .6 approved, noting MSC 89's concurrent decision, the draft provisional agenda for BLG 16;
- .7 noted the report on the status of the Sub-Committee's planned outputs in the High-level Action Plan for the current biennium; and
- .8 agreed on the urgent matters emanating from BLG 16 to be reported to MEPC 63 in relation to:
- .1 evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments; and
  - .2 development of Guidelines and other documents for uniform implementation of the 2004 BWM Convention.

**Outcome of FSI 19**

11.23 The Committee noted that the nineteenth session of the Sub-Committee on Flag State Implementation (FSI 19) had been held from 21 to 25 February 2011 and its report on that session had been circulated under the symbol FSI 19/19. The matters of interest to the Committee's work were set out in document MEPC 62/11/1 (Secretariat).

11.24 The Committee approved the report of FSI 19 in general and took action on the specific points listed for decision in paragraph 2 of document MEPC 62/11/1 as indicated in the ensuing paragraphs.

***Mandatory reports under MARPOL***

11.25 The Committee noted that mandatory reports required under MARPOL for 2009 were submitted by just over one quarter of the Parties, and urged all Parties to MARPOL to submit mandatory reports in accordance with MEPC/Circ.318. Additionally, the Committee endorsed the actions taken to improve the GISIS module on port reception facilities.

***Review of the guidelines for inspection of anti-fouling systems on ships***

11.26 The Committee adopted, by resolution MEPC.208(62), the 2011 Guidelines for inspection of anti-fouling systems on ships, as set out in annex 27 and, noting the completion of this work, agreed to delete this item from the Sub-Committee's agenda.

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***Harmonization of Port State Control activities***

11.27 The Committee approved, noting MSC's concurrent decision, Procedures for Port State Control, 2011 and an associated draft Assembly resolution, for submission to the Assembly for adoption at its twenty-seventh session, as set out in annex 28.

11.28 The Committee also approved, noting MSC's concurrent decision, the further development of the Guidelines for port State control officers related to the ISM Code in co-operation with the Joint MSC/MEPC Working Group on the Human Element.

11.29 The Committee noted the decision taken on the further development of the Guidelines for port State control under the 2004 BWM Convention.

***Review of the survey guidelines under the HSSC***

11.30 In considering the perceived port State control problem regarding the first issuance of an IAPP Certificate to a newbuild, prior to the ship having received any bunkers and consequently not being in possession of the required bunker delivery notes, and also the approval of a draft MEPC circular on the Revised form of supplement to the International Air Pollution Prevention Certificate, to amend MEPC.1/Circ.718, the Committee noted that these action points had already been covered under agenda item 4 (see paragraphs 4.31 and 4.32).

11.31 The Committee approved, noting MSC's concurrent decision, draft Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2011, as consolidated by the Secretariat, and the associated draft Assembly resolution for submission to the Assembly for adoption at its twenty-seventh session, as set out in annex 29.

***Review of the Code for the implementation of mandatory IMO instruments and the development of a Code for recognized organizations***

11.32 In considering document MEPC 62/11/9 (United States), which proposed deletion of the square brackets around text proposed by the United States aiming to clarify that in both the draft IMO Instruments Implementation Code (IIC Code) and the Recognized Organizations Code (RO Code), a regulatory regime only applies between the flag State and the recognized organization it has authorized, the Committee agreed, noting that a concurrent conclusion had been reached at MSC 89, to delete the square brackets around the proposed text in both draft instruments and keep the text\*. Subsequently, the Committee:

- .1 approved, noting MSC's concurrent decision, the revised Code for the implementation of mandatory IMO instruments in its mandatory form, renamed as "IMO Instruments Implementation Code (IIC)", for submission to the Assembly at an appropriate session, for adoption;
- .2 noted the considerations and rationale for the process of making the IMO Instruments Implementation Code and auditing mandatory;
- .3 approved, noting MSC's concurrent decision, the draft Code for the implementation of mandatory IMO instruments, 2011, as consolidated by the Secretariat, and the associated draft Assembly resolution for submission, as set out in annex 30, through the Council at its twenty-sixth extraordinary session, to the Assembly at its twenty-seventh session for adoption;

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\* The Committee noted that several reservations had been entered by some Member States with regard to the decision of MSC 89 on the two draft instruments (see MSC 89/25, paragraph 12.17).

- .4 extended, noting MSC's concurrent decision, the target completion date of the output on the development of a Code for Recognized Organizations (RO Code) to the year 2012; and
- .5 noted the request to the Secretariat to prepare the draft text of a relevant instrument to adopt the RO Code and draft amendments to existing instruments to make the Code mandatory, and to give future consideration of the time period to be set between the adoption of the Code and the entry into force of the regulations mandating that RO Code.

### ***Biennial agenda and provisional agenda for FSI 20***

11.33 The Committee approved the Sub-Committee's draft 2012-2013 biennial agenda and provisional agenda for FSI 20 (see also paragraph 20.10) and noted the status of planned outputs of the High-level Action Plan of the Organization and priorities for the 2010-2011 biennium relevant to the Sub-Committee.

### **Outcome of STW 42**

11.34 The Committee noted that the forty-second session of the Sub-Committee on Standards of Training and Watchkeeping (STW 42) had been held from 24 to 28 January 2011 and its report on that session had been circulated under the symbol STW 42/14. In considering the report, the Committee noted the following points in relation to the validation of model courses:

- .1 the Sub-Committee had considered document STW 42/3/2 submitted by the Netherlands which provided detailed information on a draft model course on marine environmental awareness;
- .2 the Sub-Committee had validated the model course, as amended by a drafting group, and instructed the Secretariat to finalize and publish it as soon as possible; and
- .3 the Sub-Committee had recalled that the validation of model courses meant that it found no grounds to object to their contents. In doing so, the Sub-Committee did not approve the document and it could not therefore be regarded as an official interpretation of the Convention.

### **Outcome of DSC 15**

11.35 The Committee noted that the fifteenth session of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers had been held from 13 to 17 September 2010 and its report on that session had been circulated under the symbol DSC 15/18.

11.36 The Committee noted the outcome of the Sub-Committee's consideration of matters related to waste reception facilities for goods subject to MARPOL Annex III and, in particular, endorsed the view that amendments to MARPOL Annex III are not considered necessary, taking into account that when packaged cargoes are damaged, they no longer fall within the definition of packaged cargo and, therefore, could be treated as residues or wastes, which are covered under MARPOL Annex V.



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## Outcome of NAV 57

11.37 The Committee noted that the fifty-seventh session of the Sub-Committee on Navigation (NAV 57) was held from 6 to 10 June 2011 and its report on that session will be circulated under the symbol NAV 57/15. An urgent matter arising from this meeting concerned the Unified Interpretations on the application of SOLAS, MARPOL and Load Line requirements to conversions of single-hull tankers to double-hull tankers or bulk carriers/ore carriers, as reported in document MEPC 62/11/11 (Secretariat). NAV 57 had been requested to comment on a draft MSC-MEPC circular on this subject and, subsequently, part of the draft circular, as set out in document DE 54/23, annex 4 (paragraph 9 of appendix 1), had been reviewed, resulting in the following amended text:

### **"Regulation 22 – Navigation bridge visibility**

For single-hull oil tanker conversion into double-hull oil tanker or bulk carrier, the level of visibility possessed by the ship prior to the conversion at the ballast loading condition should be maintained after the conversion. Where a conversion involves the modification of structural arrangements used to establish minimum bridge visibility, the provisions of SOLAS regulation V/22 should apply."

11.38 After consideration, the Committee approved the modification for inclusion in the MSC-MEPC circular on Unified interpretations on the application of SOLAS, MARPOL and Load Line requirements to conversions of single-hull tankers to double-hull tankers or bulk carriers, as noted earlier (see paragraph 11.3).

## 12 WORK OF OTHER BODIES

### Outcome of FAL 36

12.1 The Committee noted that the thirty-sixth session of the Facilitation Committee (FAL 36) was held from 6 to 10 September 2010 and its report had been circulated under the symbol FAL 36/17. The outcome of FAL 36, relevant to the work of the Committee, was summarized in documents MEPC 62/12 and MEPC 62/12/Add.1.

12.2 The Committee noted, in general, the outcome of FAL 36 on all issues of relevance to it and agreed to take FAL's action into account, as appropriate, under the relevant items of its agenda.

12.3 The Committee considered two specific actions as presented in document MEPC 62/12 and:

- .1 concurred with the action taken by MSC 88 and approved the proposed amendments to the draft revised list of certificates and documents required to be carried on board ships; and
- .2 decided to defer, due to time constraints, consideration of the proposal that future revisions of the list of certificates and documents required to be carried on board ships should be initiated by the MSC on a regular basis.

12.4 In considering document MEPC 62/12/Add.1, the Committee approved the inclusion of additional entries concerning MARPOL Annex VI and the NO<sub>x</sub> Technical Code in the revised list of certificates and documents required to be carried on board ships, as set out in the annex to that document.

**Outcome of C 105**

12.5 The Committee noted that the 105th session of the Council (C 105) was held from 1 to 5 November 2010, its summary of decisions was issued under the symbol C 105/D and matters of interest to the Committee were summarized in document MEPC 62/12/2, including the Council's decisions concerning the report of MEPC 61; the Voluntary IMO Member State Audit Scheme; relations with non-governmental organizations; and the report on the status of conventions and other multilateral instruments.

12.6 As regards the report of MEPC 61 to the Council, the Committee noted that the Council had endorsed:

- .1 the Committee's proposals on activities, priorities and plan of meeting weeks of the two Committees and their subsidiary bodies for the 2012-2013 biennium, for inclusion in the Secretary-General's relevant budget proposals, which MSC 88 had concurred with;
- .2 the Committee's approval of planned intersessional meetings in 2011; and
- .3 the unplanned output "Revision of resolution MEPC.159(55)" approved by the Committee for the DE Sub-Committee.

12.7 The Committee also noted that the Council had decided to transmit the report of MEPC 61 to the twenty-seventh session of the Assembly with its comments and recommendations, in accordance with Article 21(b) of the IMO Convention.

**Outcome of MSC 88**

12.8 The Committee noted that the eighty-eighth session of the Maritime Safety Committee (MSC 88) was held from 24 November to 3 December 2010 and its report was circulated under the symbol MSC 88/26 and Add.1 and 2. The outcome of MSC 88, relevant to the work of the Committee, was summarized in document MEPC 62/12/1.

12.9 The Committee noted, in general, the outcome of MSC 88 on all issues of relevance to the Committee and agreed to take MSC's action into account, as appropriate, under the relevant items of its agenda.

12.10 The Committee also noted that MSC 88 concurred with the decisions of MEPC 61 on the following topics:

- .1 endorsement of the decisions of FSI 18 regarding the pursuance of the current analysis for future consolidated audit summary reports (CASRs), as well as those of the root causes of the findings, after a more substantial number of audits have been carried out, in order to make recommendations on all relevant matters and, in particular, for capacity-building or technical assistance, and for advising the Council accordingly; and
- .2 the view of FSI 18 on the time frame and schedule of its activities to institutionalize the IMO Member State Audit Scheme, in particular the envisaged sequence of the work of the FSI Sub-Committee to meet the 2015 deadline for making the audit scheme mandatory.

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## Outcome of MSC 89

12.11 The Committee noted that the eighty-ninth session of the Maritime Safety Committee (MSC 89) was held from 11 to 20 May 2011 and its report was circulated under the symbol MSC 89/25 and Add. 1, 2, 3 and 4. The outcome of MSC 89, relevant to the work of the Committee, was summarized in document MEPC 62/12/3.

12.12 The Committee noted, in general, the outcome of MSC 89 on all issues of relevance to the Committee and agreed to take MSC's action into account, as appropriate, under the relevant items of its agenda.

12.13 The Committee agreed to consider the outcome of MSC 89 on Formal Safety Assessment (FSA); work programmes and provisional agendas of subsidiary bodies; and the application of the Committees' Guidelines under agenda items 18, 20 and 21, respectively. The Committee also agreed to consider the report of the Chairmen's meeting (13 May 2011), together with the action of MSC 89 on the matter, under agenda item 21.

12.14 The Committee also noted the following information, and actions taken by MSC 89, which are of interest to it:

- .1 progress made by the DE Sub-Committee in the development of a mandatory Polar Code (see also agenda item 11);
- .2 approval of the draft Assembly resolution on adoption of the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (2011 ESP Code) for submission to the twenty-seventh session of the Assembly for adoption; and
- .3 GISIS presently consists of 26 modules, which have been developed or are in the process of development, for the collection, processing and sharing of shipping-related data.

12.15 The Committee further noted the agreement, in principle, of MSC 89, subject to the concurrent decision of MEPC 62, to entrust a leading and coordinating role for the implementation of the Organization's strategy to address the human element to the STW Sub-Committee and to include in the 2012-2013 biennial agenda of the STW Sub-Committee and in the provisional agenda for STW 43, a planned output on the "Role of the human element" as an ongoing output. In considering this action, a number of delegations indicated that a detailed discussion on this item was required but, in view of time constraints and noting that agenda item 17 on the Role of human element was postponed, it was agreed that this matter should be deferred until the next meeting of the Committee (MEPC 63).

## 13 STATUS OF CONVENTIONS

13.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

## 14 HARMFUL ANTI-FOULING SYSTEMS FOR SHIPS

14.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

**15 PROMOTION OF IMPLEMENTATION AND ENFORCEMENT OF MARPOL AND RELATED INSTRUMENTS**

15.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

**16 TECHNICAL CO-OPERATION SUB-PROGRAMME FOR THE PROTECTION OF THE MARINE ENVIRONMENT**

16.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

**17 ROLE OF THE HUMAN ELEMENT**

17.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

**18 FORMAL SAFETY ASSESSMENT**

18.1 The Committee recalled that MEPC 56, in July 2007, had noted that the one matter that needed consideration within the context of the Formal Safety Assessment Guidelines relevant to its work was the draft Environmental Risk Evaluation Criteria. It was recognized that there was a need to carry out a more in-depth analysis of the proposed environmental risk evaluation criteria for the purpose of the Formal Safety Assessment (FSA) before inclusion of such criteria in the IMO FSA Guidelines (MSC/Circ.1023-MEPC/Circ.392, as consolidated in MSC 83/INF.2).

18.2 The Committee also recalled that while progress had been made on this subject since MEPC 56 through work carried out by correspondence, MEPC 60, noting that further work was needed on the subject, had established a Working Group on Environmental Risk Evaluation Criteria within the framework of the FSA methodology. In approving the report of the Working Group, MEPC 60 had noted that progress had been made in determining a CATS criterion (Cost of Averting a Tonne of Oil Spilled) based on a non-linear volume dependent function, and urged Member Governments/organizations to verify and adjust, as necessary, the proposed regression formula and to submit the data for each cost component and the results of the analysis for consideration by the Committee.

18.3 The Committee further recalled that MEPC 61, when considering the submissions at that session, had noted that the contributions originated from the same four Member States and had agreed that data from other Administrations were needed if the Committee was to make well founded decisions. Member Governments/organizations were urged to provide information, particularly on the cost of oil spills, to ensure that any derived oil spill cost function is representative of oil spill data. MEPC 61 had also agreed to establish a working group at MEPC 62, with a view to concluding the work. MSC was invited to note the progress to date and the timelines to finalize this work.

18.4 The Committee noted that six documents were submitted under this agenda item: MEPC 62/18 and MEPC 62/18/1 (Greece); MEPC 62/18/2 (Japan); and MEPC 62/18/3, MEPC 62/18/4 and MEPC 62/INF.24 (Germany, Japan and the United States). On a proposal by the Chairman, the Committee agreed that the documents be introduced in the working group to be established, recognizing that the outcome of the group would be reported to plenary for its consideration.

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## Establishment of the Working Group

18.5 The Committee established the Working Group on Environmental Risk Evaluation Criteria under the chairmanship of Professor Harilaos N. Psaraftis (Greece) with the following Terms of Reference:

Using documents MEPC 62/18, MEPC 62/18/1, MEPC 62/18/2, MEPC 62/18/3, MEPC 62/18/4 and MEPC 62/INF.24 as a basis, and taking into account any other information and comments, the Working Group was instructed to:

- .1 finalize in Step 4 of the FSA an appropriate volume-dependent CATS global threshold scale or function for ascertaining if a specific Risk Control Option (RCO) is cost-effective, including its integration within the FSA methodology;
- .2 recommend a way of combining environmental and safety criteria for those RCOs that affect both environmental and fatality risk;
- .3 conclude on an appropriate risk matrix or index for environmental criteria;
- .4 recommend an appropriate ALARP region and F-N diagram, including an appropriate value for the slope of the F-N curve; and
- .5 submit a written report to plenary on Thursday, 14 July 2011.

18.6 In releasing the Working Group, the Committee reminded the Group that while much effort had been made over the last three years to progress the work on environmental risk evaluation criteria, conclusion of this work was earmarked for 2011, as established in the High-level Action Plan of the Organization, and, therefore, every effort should be made to adhere to this timeline, given that these criteria were slated for inclusion in the IMO FSA Guidelines.

## Report of the Working Group on Environmental Risk Evaluation Criteria

18.7 The Committee considered and approved the report of the Working Group (MEPC 62/WP.13) in general and, in particular:

- .1 endorsed the consolidated oil spill database and requested the Secretariat to arrange to make it publicly available;
- .2 endorsed the approach on an appropriate volume-dependent CATS global threshold function for ascertaining if a specific Risk Control Option (RCO) is cost-effective, including the cost functions proposed and its integration within the FSA methodology;
- .3 endorsed the proposal on how to combine environmental and safety criteria for RCOs that reduce environmental and safety risk;
- .4 endorsed the proposal on how to proceed on the ALARP region and F-N curves;
- .5 invited the Maritime Safety Committee to consider the outcome of the work on environmental risk evaluation criteria, and in particular, to incorporate the criteria set out in annex 31 into the FSA Guidelines; and

- .6 agreed that the work on the development of environmental risk evaluation criteria within the framework of the FSA Guidelines is completed and this item can be deleted from the agenda of MEPC 63 and the High-level Action Plan of the Organization.

18.8 Referring to paragraph 35 of the report of the Working Group, the delegations of Brazil and China reserved their position with regard to the procedures for drafting the annex to the report of the Working Group since, in their opinion, when the draft report was presented to the Group for its consideration, it was only to be subjected to minor editorial changes and the establishment of a sub-group/splinter group to develop such an annex was not in keeping with the methods of work of the Organization. Furthermore, it was their view that the preparation of a text for incorporation in the FSA Guidelines went beyond the terms of reference of the Group. The delegations of Brazil and China noted that they would be willing to lift their reservation should the Committee agree to establish a correspondence group to analyse the annex for incorporation in the FSA Guidelines.

18.9 The Chairman of the Working Group explained that the text produced for the annex was drafted by a splinter group open to all members of the Working Group, and that the subsequent text was circulated to the entire Working Group, and thereafter thoroughly discussed and reviewed by it. In doing so, all members of the Working Group had the opportunity to participate in the drafting and to discuss and review the text.

18.10 The delegation of Norway, in supporting the working procedures of the Group and the explanation given by the Chairman, emphasized that, in its view, there had not been a deviation from the procedures, nor from the Terms of Reference given to the Group.

18.11 Following an intervention by the delegation of Denmark, the Committee noted that the review of an FSA study on crude oil tankers was still pending (MEPC 58/17/2 and MEPC 58/INF.2), and, with the conclusion of the work on Environmental Risk Evaluation Criteria (EREC), the Committee agreed to invite MSC to forward the study to its FSA Experts Group for consideration.

## **19 NOISE FROM COMMERCIAL SHIPPING AND ITS ADVERSE IMPACTS ON MARINE LIFE**

19.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

## **20 WORK PROGRAMME OF THE COMMITTEE AND SUBSIDIARY BODIES**

### **Revision of the Standard specification for shipboard incinerators (resolution MEPC.76(40))**

20.1 The Committee noted the proposal by Denmark (MEPC 62/20) to revise resolution MEPC.76(40), as amended by resolution MEPC.93(45), to take into consideration whether an upper limit of the incinerator capacity (presently 1,500 kW) is needed at all or whether to extend the scope of the resolution to apply to incinerators with capacities of up to 3,000-5,000 kW, for inclusion as a new planned output of the DE Sub-Committee for the 2012-2013 biennium.

20.2 In accordance with paragraph 2.20 of the Committees' Guidelines (MSC-MEPC.1/Circ.2), the Chairman made a preliminary assessment (MEPC 62/WP.7, annex 1) on the proposed new planned output by Denmark. The Chairman's assessment showed that the criteria for general acceptance provided in paragraph 2.10 of the Committees' Guidelines had been met.

20.3 The Committee, having considered the proposal, approved its inclusion as a new planned output in the 2012-2013 biennial agenda of the DE Sub-Committee and in the provisional agenda of DE 56 (13-17 February 2012) entitled "Revision of the Standard specification for shipboard incinerators (resolution MEPC 76(40))" with a target completion year of 2012.

#### **Guidelines on International Offers of Assistance**

20.4 The Committee noted the proposal by the United States (MEPC 62/20/1) to develop an internationally accepted guidance for International Offers of Assistance in response to a marine oil pollution incident, for inclusion as a new planned output of the OPRC-HNS Technical Group for the 2012-2013 biennium.

20.5 In accordance with paragraph 2.20 of the Committees' Guidelines (MSC-MEPC.1/Circ.2), the Chairman made a preliminary assessment (MEPC 62/WP.7, annex 2) on the proposed planned output by the United States. The Chairman's assessment showed that the criteria for general acceptance provided in paragraph 2.10 of the Committees' Guidelines had been met.

20.6 The Committee, having considered the proposal, approved its inclusion as a new planned output in the 2012-2013 biennial agenda of the OPRC-HNS Technical Group to develop an internationally accepted guidance for International Offers of Assistance in response to a marine oil pollution incident with a target completion year of 2012.

#### **Biennial agenda of the BLG Sub-Committee**

20.7 The Committee noted that the 2012-2013 biennial agenda of the BLG Sub-Committee and the provisional agenda for BLG 16 were approved by MSC 89, including the new agenda item on "Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels", which was approved by MEPC 61, as set out in document MSC 89/25, annexes 32 and 33.

20.8 The Committee, having considered document MEPC 62/WP.3, annex 1, also approved the biennial agenda of the BLG Sub-Committee and the provisional agenda for BLG 16, and requested the Secretariat to inform MSC accordingly. The biennial agenda of the BLG Sub-Committee and the provisional agenda for BLG 16, as approved, are set out in annex 32.

#### **Biennial agenda of the FSI Sub-Committee**

20.9 The Committee noted that the 2012-2013 biennial agenda of the FSI Sub-Committee and the provisional agenda for FSI 20 were approved by MSC 89, including a new agenda item on "Co-operation with FAO: preparation and holding of the third session of the IMO/FAO Working Group on IUU fishing and related matters", which was approved by MEPC 61, as set out in document MSC 89/25, annexes 32 and 33.

20.10 The Committee, having considered document MEPC 62/WP.3, annex 2, also approved the biennial agenda of the FSI Sub-Committee and the provisional agenda for FSI 20, and requested the Secretariat to inform MSC accordingly. The biennial agenda of the FSI Sub-Committee and the provisional agenda for FSI 20, as approved, are set out in annex 33.

**Items in the biennial agendas of the DE, DSC, NAV and STW Sub-Committees relating to environmental issues**

20.11 The Committee noted that MSC 89 revised and approved the 2012-2013 biennial agendas of the DE, DSC, NAV and STW Sub-Committees (MSC 89/25, paragraphs 22.7, 22.21, 22.28 and 22.42 and annex 32).

20.12 The Committee also noted that MSC 89 agreed to include, in the 2012-2013 biennial agenda of the STW Sub-Committee and the provisional agenda for STW 43, a planned output on "Enhancing the efficiency and user-friendliness of the ISM Code", with a target completion year of 2013 for consideration under the prospective ongoing output and agenda item on "Role of human element" (MEPC 62/12/3, paragraph 33).

20.13 As indicated in paragraph 7.16 above, the Committee also approved the inclusion in the 2012-2013 biennial agenda of the DSC Sub-Committee of a new output entitled "Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V", with a target completion year of 2012.

20.14 Having considered document MEPC 62/WP.2, the Committee approved the items related to environmental issues in the biennial agendas of the DE, DSC, NAV and STW Sub-Committees, and requested the Secretariat to inform MSC accordingly. The items related to environmental issues in the revised planned outputs of the DE, DSC, NAV and STW Sub-Committees are set out in annex 34.

**Status of planned outputs of the Committee for the 2010-2011 biennium**

20.15 The Committee recalled that, in accordance with paragraph 9.1 of the Guidelines on the application of the Strategic Plan and the High-level Action Plan of the Organization (resolution A.1013(26)), the reports on the status of the planned outputs included in the High-level Action Plan and priorities for the 2010-2011 biennium (resolution A.1012(26)) should be annexed to the report of each session of the sub-committees and the committees and to the biennial report of the Council to the Assembly and that such reports should separately identify unplanned outputs accepted for inclusion in the biennial agendas.

20.16 The Committee, having considered document MEPC 62/WP.5 on the status of planned outputs of the Committee for the 2010-2011 biennium containing the items related to the work of the Committee and relevant sub-committees listed in resolution A.1012(26), endorsed the status of planned outputs for the current biennium, which was since updated by the Secretariat to take into account the outcome of MEPC 62, as set out in annex 35.

**Proposals by the Committee for the High-level Action Plan of the Organization and priorities for the 2012-2013 biennium**

20.17 The Committee recalled that, in the context of resolution A.1011(26) on Strategic Plan for the Organization (for the six-year period 2010 to 2015) and resolution A.1012(26), MEPC 61 agreed to prepare its proposal for the High-level Action Plan for the 2012-2013 biennium for submission to C/ES.26.

20.18 The Committee, having considered document MEPC 62/WP.6 on such proposals for the MEPC, in the form of modifications to those for the 2010-2011 biennium and as revised by MSC 89, approved the proposals for the High-level Action Plan of the Organization and priorities for the 2012-2013 biennium relevant to the Committee, as set out in annex 36, for submission to C/ES.26 and requested the Secretariat to update the annexed proposals, taking into account the outcome of MEPC 62 before submission to C/ES.26.



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**Items to be included in the draft agendas of MEPC 63, MEPC 64 and MEPC 65**

20.19 The Committee, having considered document MEPC 62/WP.4, and taking into account the decisions made at this session, approved the items to be included in the agendas for MEPC 63, MEPC 64 and MEPC 65, as set out in annex 37, and requested the Secretariat to inform MSC accordingly.

**Dates for MEPC 63, MEPC 64 and MEPC 65**

20.20 The Committee noted that MEPC 63 would be held from 27 February to 2 March 2012 and that MEPC 64 is tentatively scheduled from 1 to 5 October 2012, whilst the dates for MEPC 65 in 2013 are not yet known.

**Working/review/drafting groups at MEPC 63**

20.21 The Committee agreed, in principle, to establish the following working/review/drafting groups at MEPC 63:

- .1 Working Group on Air Pollution and Energy Efficiency;
- .2 Working Group on Guidelines for Ship Recycling;
- .3 Drafting Group on Amendments to Mandatory Instruments; and
- .4 Ballast Water Review Group.

**Correspondence Groups**

20.22 The Committee agreed to establish the following intersessional correspondence groups, which would report to MEPC 63 (unless otherwise specified):

- .1 Correspondence Group on ship recycling guidelines;
- .2 Correspondence Group on reviewing the status of the technological developments to implement Tier III NO<sub>x</sub> standards; and
- .3 Correspondence Group on reviewing the guidelines for the implementation of Annex V of MARPOL.

**Intersessional meetings**

20.23 The Committee noted that MSC 89 concurred with the approval by MEPC 61 of the seventeenth meeting of the ESPH Working Group, which will take place from 24 to 28 October 2011 (MEPC 62/12/3, paragraph 34).

20.24 The Committee approved the holding of the following intersessional meetings:

- .1 OPRC/HNS Technical Group to be held in the week after MEPC 63 in March 2012, which should report to MEPC 64;
- .2 ESPH Working Group to be held in 2012; and
- .3 Working Group on Energy Efficiency Measures for Ships.

## **21 APPLICATION OF THE COMMITTEES' GUIDELINES**

21.1 The Committee recalled that MEPC 61 considered and approved, in principle, a revised text of the Committees' Guidelines, including amendments in accordance with the decision of C 104 concerning translation of bulky documents, which is contained in annex 22 to document MEPC 61/24.

21.2 The Committee noted that MSC 88 concurred, in principle, with the approval of MEPC 61 concerning the revised text of the Committees' Guidelines and noted further that MSC 88 considered the draft amendments on human element principles prepared by the Joint MSC/MEPC Working Group on the Human Element for inclusion in the Committees' Guidelines with a view to final approval at MSC 89.

21.3 The Committee noted that MSC 89 considered and approved in general the report of the 2011 Chairmen's meeting (MSC 89/WP.10), held on 13 May 2011, which had considered issues related to the revised Committees' Guidelines; the drafting of amendments to IMO instruments, including the development of a methodology for establishing the scope of application of amendments to certain chapters of the SOLAS Convention; reducing administrative burdens, as invited by the Council at its 105th session; and the application of the Organization's Risk Management Framework, as invited by the fifth session of the Council Risk Review, Management and Reporting Working Group (CWGRM 5).

### **Approval of the draft revised Committees' Guidelines**

21.4 The Committee noted that MSC 89 approved, subject to concurrent decision of MEPC 62, further revisions to the Committees' Guidelines in time for completion of the Migration Plan relating to the Guidelines on the application of the Strategic Plan and the High-level Action Plan of the Organization during the current biennium.

21.5 The Committee concurred with the decision of MSC 89 on approval of the further revised Committees' Guidelines (MSC 89/25, annex 31) and requested the Secretariat to issue them as MSC-MEPC.1/Circ.4 as soon as possible.

### **Release of the Committees' Guidelines on the IMO website**

21.6 As regards the request to release the Committees' Guidelines on IMO's website, the Committee concurred with the decision of MSC 89 that there was no need for such action, as the Committees' Guidelines can always be consulted on and downloaded from IMODOCS.

## **22 ELECTION OF THE CHAIRMAN AND VICE-CHAIRMAN FOR 2012**

22.1 In accordance with rule 17 of the Rules of Procedure, the Committee unanimously re-elected Mr. Andreas Chrysostomou (Cyprus), by acclamation, as Chairman for 2012.

22.2 The Committee, noting the unavailability of Captain Manuel Nogueira (Spain) for re-election as its Vice-Chairman for 2012, agreed to conduct the election at its next session in February/March 2012. The Committee expressed appreciation to Captain Nogueira for his services to its work and to the Organization.

## **23 ANY OTHER BUSINESS**

23.1 The Committee, due to time constraints, agreed to postpone consideration of all documents submitted under this item until its next session in February/March 2012.

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## **ANNEX 1**

### **STATEMENT BY THE DELEGATION OF BRAZIL ON THE PROVISIONAL AGENDA AND THE PROPOSED TIMETABLE**

Thank you, Mr. Chairman. Good morning to you, good morning to all.

Before approving the provisional agenda, Brazil would like to request that all documents related to the reduction of GHG emissions from ships that were submitted under agenda item 6.2 be considered under agenda item 5.

Document MEPC 62/6/3, which presents an amendment proposal containing mandatory technical and operational measures under MARPOL Annex VI, constitutes a new draft proposal that needs to be subject to a first examination by the Committee under agenda item 5 before consideration under agenda item 6. The amendment proposal differs from what was prepared by the Working Group on GHG at MEPC 61. From what is contained in the report of MEPC 61 (MEPC 61/24), and according to the practice of this Organization and to the rules for amendments to the MARPOL Convention and its Annexes, the proposal must be referred to consideration by Parties, before it can be considered for adoption by the Committee under agenda item 6. This first consideration should be undertaken under item 5 of the provisional agenda, which refers to the reduction of GHG emissions from ships.

Brazil would like to note that more than 70 documents on GHG emissions from ships were submitted for consideration by the Committee, which is a clear indication that this issue is still premature for approval. It is, thus, essential that the amendment proposal and related documents be considered by a working group to be established under agenda item 5. This would also enable the Committee to address the technical, economic and technological uncertainties and the calculation issues related to the EEDI and SEEMP, before it considers approving the proposed amendments.

Furthermore, Mr. Chairman, Brazil requests that this statement be reflected in the final report of this Committee.

Thank you, Mr. Chairman.

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**ANNEX 2**

**RESOLUTION MEPC.196(62)**

**Adopted on 15 July 2011**

**2011 GUIDELINES FOR THE DEVELOPMENT OF THE SHIP RECYCLING PLAN**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that the International Conference on the Safe and Environmentally Sound Recycling of Ships held in May 2009 adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) together with six Conference resolutions,

NOTING that regulation 9 of the Annex to the Hong Kong Convention requires that a ship-specific Ship Recycling Plan shall be developed by the Ship Recycling Facility(ies) prior to any recycling of a ship, taking into account the guidelines developed by the Organization,

BEARING IN MIND that the International Conference on the Safe and Environmentally Sound Recycling of Ships, in its resolution 4, invited the Organization to develop Guidelines for global, uniform and effective implementation and enforcement of the relevant requirements of the Convention as a matter of urgency,

HAVING CONSIDERED, at its sixty-second session, the draft 2011 Guidelines for the development of the ship recycling plan, developed by the Working Group on Guidelines for Ship Recycling,

1. ADOPTS the 2011 Guidelines for the development of the ship recycling plan, as set out in the annex to this resolution;
2. INVITES Governments to bring the Guidelines to the attention of shipowners, ship operators and ship recycling facilities and to encourage their application as soon as possible; and to apply them when the Hong Kong Convention becomes applicable to them; and
3. REQUESTS the Committee to keep the Guidelines under review.

ANNEX

**2011 GUIDELINES FOR THE DEVELOPMENT OF THE SHIP RECYCLING PLAN (SRP)**

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## **1 INTRODUCTION**

### **1.1 Objectives of the guidelines**

These guidelines provide stakeholders, particularly Ship Recycling Facilities, with recommendations for the development of a Ship Recycling Plan (SRP) in accordance with the requirements of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereafter referred to as "the Convention").

It should be noted that regulation 9 of the annex to the Convention requires the Ship Recycling Facility to develop a ship-specific SRP, taking these guidelines into account.

These guidelines should be used primarily by Ship Recycling Facilities, taking into account information provided by the shipowner. Competent Authorities and Administrations may also find merit in these guidelines with respect to the approval process and implementation of the Convention.

### **1.2 Approach of the guidelines**

Regulation 9 of the Annex to the Convention requires Ship Recycling Facilities to prepare a ship-specific SRP. These guidelines are separated into two parts: general guidance on information that should be gathered and reviewed by the Ship Recycling Facility in order to develop the SRP (section 3: General) and guidance for the recommended content of a ship-specific SRP (section 4: Framework of SRP).

## **2 DEFINITIONS**

The terms used in these guidelines have the same meaning as those defined in the Convention and in the *Guidelines for Safe and Environmentally Sound Ship Recycling* ("Facility Guidelines"). The following additional definition applies to these guidelines only:

"The ship" means the particular ship which a Ship Recycling Facility is going to recycle, and for which an SRP is required.

## **3 GENERAL**

The Convention requires that the SRP should be explicitly or tacitly approved by the Competent Authority and verified as properly reflecting the information contained in the Inventory of Hazardous Materials (IHM) during the final survey before issuance of an International Ready for Recycling Certificate. Preparation of the SRP should therefore begin well before the ship arrives at the Ship Recycling Facility.

As regards the languages of the SRP, in accordance with regulation 9.2 of the annex to the Convention, the shipowner may ask the Administration whether it is acceptable for the Ship Recycling Facility to use a language other than English, French or Spanish, and convey the decision of the Administration to the Ship Recycling Facility accordingly.

### **3.1 Review of ship-specific information**

For each ship that is to be recycled, the Ship Recycling Facility should, in accordance with regulation 8.4 of the Annex to the Convention, cooperate with the shipowner in order to prepare a SRP that incorporates all relevant information about the ship that may affect its safe and environmentally sound recycling.

The IHM is essential to the Ship Recycling Facility for planning and executing the removal and management of Hazardous Materials. The Ship Recycling Facility should obtain the completed IHM, including Part II and Part III, taking into account possible variations resulting from the ship's subsequent operations.

Examples of ship-specific information that is useful to the Ship Recycling Facility when developing a SRP include finished drawings and final specifications such as: general arrangement, capacity plan, shell expansion plan, fire control plan, trim and stability calculation, and light weight distribution or calculation table. Also the following may provide useful information: midship section, construction profile (including longitudinal sections, deck, inner bottom and deckhouse), longitudinal and transverse bulkhead principal transverse sections, fore and aft construction, superstructures, accommodation plan, hydrostatic curve or table, deck piping system, general arrangement of ventilators and air ducts, painting scheme, joiner works, engine room arrangement (if appropriate) and bilge piping system of pump room, pump room arrangement, engine room piping diagram, ballast piping and cargo piping diagram and manufacturers' finished drawings of major equipment. Such information could be useful in planning the ship recycling sequence in its entirety.

### **3.2 Comparison of ship-specific information with the Ship Recycling Facility Plan (SRFP) and/or Document of Authorization to conduct Ship Recycling (DASR)**

For each ship to be recycled, the ship-specific information obtained from the shipowner should be evaluated in the context of the capabilities and limitations specified in the Ship Recycling Facility Plan (SRFP) and/or Document of Authorization to conduct Ship Recycling (DASR). The SRP will need to address any ship-specific considerations that are not covered in the SRFP or that will require special procedures.

## **4 FRAMEWORK OF SRP**

The responsibility for developing a comprehensive SRP rests with the Ship Recycling Facility, although development of the SRP is a cooperative effort between the Ship Recycling Facility and the shipowner. The Ship Recycling Facility is best placed to understand and describe the methods and procedures that it uses in its recycling operations and it has knowledge of the available facilities and capabilities for the safe and environmentally sound management of all Hazardous Materials and wastes generated during recycling, of the skills and capabilities of its workforce and the availability of local support services, and of the relevant national laws and regulations that apply to the facility and its activities, including the activities which it is approved to perform under its DASR. A sample cover page for the SRP is included in the appendix. The body of the SRP should include a more detailed narrative of the ship-specific recycling elements.

The SRP should describe how the Ship Recycling Facility will recycle the specific ship in a safe and environmentally sound manner, covering the recycling process steps and their sequence over the entire process. Any processes or procedures that deviate from the SRFP and are specific to the ship should be described in detail in the SRP.

Where more than one Ship Recycling Facility is used, SRPs should be prepared separately, in principle, by each of the Facilities involved, according to their respective duties and indicate the order in which the activities will occur.

### **4.1 Pre-arrival elements**

The SRP should include a description of any specific preparatory work that should be carried out. The SRP should clarify whether and to what extent any preparatory work – such as



pre-treatment, identification of potential hazards and removal of stores – will take place at a location other than the Ship Recycling Facility identified in the SRP. The extent to which such preparatory work will be covered in the SRP will depend upon the capability of the authorized Ship Recycling Facility and the scope of the agreement with the shipowner. In the case of a tanker, the ship should arrive at the Ship Recycling Facility with cargo tanks and pump room(s) in a condition that is ready for certification as Safe-for-entry, or Safe-for-hot work, or both.

The Ship Recycling Facility should plan appropriately for the ship's arrival. The SRP should include the location where the ship will be placed during recycling operations and a concise plan for the arrival and safe placement of the specific ship to be recycled.

#### **4.2 Arrival of ship**

The SRP should describe the procedures that the Ship Recycling Facility will follow to conduct a walk-through (on-board check) of the vessel in an effort to identify any potential environmental or safety issues. The Ship Recycling Facility should verify whether safe access and egress have been provided for and that the SRP is in place throughout the ship recycling process.

It is recommended that the Ship Recycling Facility should mark the location of the known Hazardous Materials. Any specific items or locations on board whose hazardous characteristics are uncertain should be marked for additional sampling as necessary.

#### **4.3 Management of Hazardous Materials**

The SRP should include information on how the type and amount of Hazardous Materials will be managed, as required by regulation 9.3 of the Convention and specify the facility's approach for managing each Hazardous Material. Special attention should be paid to the types and quantities of Hazardous Materials on the ship. If ship-specific conditions require deviation from normal practices for managing Hazardous Materials, the appropriate ship-specific measures should be described in detail in the SRP. In order to avoid confusion, it is recommended that the SRP should use the same nomenclature and identification scheme as those included in the IHM.

The SRP should also contain additional information on the management of Hazardous Materials as required in Appendix 5 of the Convention (also known as the DASR). Specifically, the SRP should describe where the Hazardous Materials are to be processed or disposed of if the operation is not being conducted at the Ship Recycling Facility. The SRP should state that the removal of Hazardous Materials will be undertaken by responsible personnel who are trained and authorized to do so.

#### **4.4 Safe-for-entry and Safe-for-hot-work procedures**

Regulation 9 of the Convention requires the SRP to include information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot-work procedures. The Ship Recycling Facility is encouraged to review the Facility Guidelines, as they contain specific technical recommendations to address these important safety issues.

While the SRFP will describe general procedures on how the Ship Recycling Facility will achieve safe atmospheric conditions during the ship recycling process, the SRP should describe in detail how Safe-for-entry and Safe-for-hot-work procedures will be implemented on the specific ship, taking account of such features as its structure, configuration, and previous cargo.

#### **4.5 Dismantling sequence**

An important component of the dismantling sequence is the removal of Hazardous Materials to the maximum extent practicable prior to and during cutting activities. Depending on a number of factors, including the age of the ship and the quantity of Hazardous Materials present, it may be impossible to remove all Hazardous Materials prior to the start of cutting activities. The SRP should include a dismantling sequence that is ship-specific and takes into account the cutting operations and locations of Hazardous Materials.

#### **4.6 Other necessary elements**

In addition to the elements described above, the SRP should include any ship specific processes and/or procedures that will be necessary to recycle the ship and that are not fully covered in the SRFP. For example, a Ship Recycling Facility may need to use additional workers or subcontractors, or they may need additional equipment to deal with unique aspects of the ship. Such ship-specific processes/procedures may take into account the technical guidance manual to be developed by the Organization.

#### **4.7 Attaching a copy of DASR**

The Ship Recycling Facility should attach a copy of the DASR to the SRP.

### **5 VERIFICATION OF COMPETENT AUTHORITY APPROVAL**

Article 16.6 of the Convention stipulates that a State shall declare whether it requires tacit or explicit approval of the SRP before a ship may be recycled. The Ship Recycling Facility should be familiar with the procedures implemented by the Competent Authority for approval of the SRP. The Competent Authority's approval process will, at a minimum, include written acknowledgement of receipt of the SRP and may include further written documentation of approval or denial for the ship-specific recycling. The written acknowledgement and/or documentation of approval should be appended to the SRP immediately upon availability and made available to appropriate authorities and stakeholders as necessary.

**APPENDIX**

**SAMPLE COVER PAGE**

**Ship Recycling Plan  
Summary of information on ship and Ship Recycling Facility**

This Ship Recycling Plan was developed in accordance with the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Convention).

**Ship information**

Name of ship	
Distinctive number or letters	
Port of registry	
Gross tonnage	
IMO number	
Name and address of shipowner	
IMO-registered owner identification number	
IMO company identification number	
Telephone number	
E-mail address	

**Ship Recycling Facility information**

Name of Ship Recycling Facility	
Distinctive Recycling Company identity No.	
Full address of Ship Recycling Facility	
Primary contact person	
Telephone number	
E-mail address	
Name, address and contact information of ownership company	
Working language(s)	

**Projected schedule for ship recycling**

Date of ship arrival at Ship Recycling Facility	
Date of commencement of ship recycling	
Date of Completion of ship recycling	
Date of completion of sale/disposal of all components	

.....  
(Date)

.....  
(Signature of Ship Recycling Facility owner/operator)

\*\*\*



**ANNEX 3**

**RESOLUTION MEPC.197(62)**

**Adopted on 15 July 2011**

**2011 GUIDELINES FOR THE DEVELOPMENT OF THE INVENTORY  
OF HAZARDOUS MATERIALS**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that the International Conference on the Safe and Environmentally Sound Recycling of Ships held in May 2009 adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) together with six Conference resolutions,

NOTING that regulations 5.1 and 5.2 of the Annex to the Hong Kong Convention require that ships shall have on board an Inventory of Hazardous Materials which shall be prepared and verified taking into account Guidelines, including any threshold values and exemptions contained in those Guidelines, developed by the Organization,

NOTING ALSO resolution MEPC.179(59) by which the Committee adopted the Guidelines for the development of the inventory of Hazardous Materials,

NOTING FURTHER that, by resolution MEPC.179(59), the Committee resolved to keep the Guidelines under review,

HAVING CONSIDERED, at its sixty-second session, the recommendation made by the Working Group on Guidelines for Ship Recycling,

1. ADOPTS the 2011 Guidelines for the development of the Inventory of Hazardous Materials as set out in the Annex to this resolution;
2. INVITES Member Governments to apply the 2011 Guidelines as soon as possible, or when the Convention becomes applicable to them;
3. AGREES to keep the 2011 Guidelines for the development of the Inventory of Hazardous Materials under review in the light of experience gained;
4. REVOKES the Guidelines adopted by resolution MEPC.179(59).

## ANNEX

### 2011 GUIDELINES FOR THE DEVELOPMENT OF THE INVENTORY OF HAZARDOUS MATERIALS

#### 1 Introduction

##### 1.1 Objectives of the Guidelines

These Guidelines provide recommendations for developing the Inventory of Hazardous Materials (hereinafter referred to as "the Inventory") to assist compliance with regulation 5 (Inventory of Hazardous Materials) of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention").

##### 1.2 Application of the Guidelines

These Guidelines have been developed to provide relevant stakeholders (e.g., shipbuilders, equipment suppliers, repairers, shipowners and ship management companies) with the essential requirements for practical and logical development of the Inventory.

##### 1.3 Objectives of the Inventory

The objectives of the Inventory are to provide ship-specific information on the actual Hazardous Materials present on board, in order to protect health and safety and to prevent environmental pollution at Ship Recycling Facilities. This information will be used by the Ship Recycling Facilities in order to decide how to manage the types and amounts of materials identified in the Inventory of Hazardous Materials (regulation 9).

#### 2 Definitions

The terms used in these Guidelines have the same meaning as those defined in the Convention, with the following additional definitions which apply to these Guidelines only.

"Homogeneous material" means a material of uniform composition throughout that cannot be mechanically disjointed into different materials, meaning that the materials cannot, in principle, be separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.

"Product" means machinery, equipment, materials and applied coatings on board a ship.

"Supplier" means a company which provides products; which may be a manufacturer, trader or agency.

"Supply chain" means the series of entities involved in the supply and purchase of materials and goods, from raw materials to final product.

"Threshold level" is defined as the concentration value in homogeneous materials.

### **3 Requirements for the Inventory**

#### **3.1 Scope of the Inventory**

The Inventory consists of:

- Part I: Materials contained in ship structure or equipment;
- Part II: Operationally generated wastes; and
- Part III: Stores.

#### **3.2 Materials to be listed in the Inventory**

Appendix 1 of the Guidelines, "Items to be listed in the Inventory of Hazardous Materials", provides information on the Hazardous Materials that may be found on board a ship. Materials set out in appendix 1 should be listed in the Inventory. Each item in appendix 1 of these Guidelines is classified under "Table A", "Table B", "Table C" or "Table D" according to its properties:

- .1 Table A comprises the materials listed in appendix 1 of the Convention;
- .2 Table B comprises the materials listed in appendix 2 of the Convention;
- .3 Table C (Potentially hazardous items) comprises items which are potentially hazardous to the environment and human health at Ship Recycling Facilities; and
- .4 Table D (Regular Consumable Goods potentially containing Hazardous Materials) comprises goods which are not integral to a ship and are unlikely to be dismantled or treated at a Ship Recycling Facility.

Table A and Table B correspond to Part I of the Inventory. Table C corresponds to Parts II and III and Table D corresponds to Part III.

#### **3.3 Materials not required to be listed in the Inventory**

Materials listed in Table B that are inherent in solid metals or metal alloys, provided they are used in general construction, such as hull, superstructure, pipes, or housings for equipment and machinery are not required to be listed in the Inventory.

#### **3.4 Standard format of the Inventory of Hazardous Materials**

The Inventory should be developed on the basis of the standard format set out in appendix 2 of these Guidelines: "Standard format of the Inventory of Hazardous Materials". Examples of how to complete the Inventory are provided for guidance purposes only.

### **4 Requirements for development of the Inventory**

#### **4.1 Development of Part I of the Inventory for new ships**

4.1.1 Part I of the Inventory for new ships should be developed at the design and construction stage.

#### 4.1.2 Checking of materials listed in Table A

During the development of the Inventory (Part I), the presence of materials listed in Table A of appendix 1 should be checked and confirmed; the quantity and location of Table A materials should be listed in Part I of the Inventory. If such materials are used in compliance with the Convention, they should be listed in Part I of the Inventory. Any spare parts containing materials listed in Table A are required to be listed in Part III of the Inventory.

#### 4.1.3 Checking of materials listed in Table B

If materials listed in Table B of appendix 1 are present in products above the threshold levels provided in Table B, the quantity and location of the products and the contents of the materials present in them should be listed in Part I of the Inventory. Any spare parts containing materials listed in Table B are required to be listed in Part III of the Inventory.

#### 4.1.4 Process for checking of materials

The checking of materials as provided in paragraphs 4.1.2 and 4.1.3 above should be based on the "Material Declaration" furnished by the suppliers in the shipbuilding supply chain (e.g., equipment suppliers, parts suppliers, material suppliers).

### **4.2 Development of Part I of the Inventory for existing ships**

In order to achieve comparable results for existing ships with respect to Part I of the Inventory, the following procedure should be followed.

The procedure is based on the following steps:

- .1 collection of necessary information;
- .2 assessment of collected information;
- .3 preparation of visual/sampling check plan;
- .4 onboard visual check and sampling check; and
- .5 preparation of Part I of the Inventory and related documentation.

The determination of Hazardous Materials present on board existing ships should, as far as practicable, be conducted as prescribed for new ships, including the procedures described in section 6 and 7 of these Guidelines. Alternatively the procedures described in subsection 4.2 may be applied for existing ships, but these procedures should not be used for any new installation resulting from the conversion or repair of existing ships after the initial preparation of the Inventory.

The procedures described in subsection 4.2 should be carried out by the shipowner, who may draw upon expert assistance. Such an expert or expert party should not be the same as the person or organization authorized by the Administration to approve the Inventory.

Please refer to appendix 4: "Flow diagram for developing Part I of the Inventory for existing ships"; and appendix 5: "Typical example of development process for Part I of the Inventory for existing ships".



#### 4.2.1 Collection of necessary information (Step 1)

The shipowner should identify, research, request, and procure all reasonably available documentation regarding the ship. Information that will be useful includes maintenance, conversion, and repair documents; certificates, manuals, ship's plans, drawings, and technical specifications; product information data sheets (such as Material Declarations); and hazardous material inventories or recycling information from sister ships. Potential sources of information could include previous shipowners, the ship builder, historical societies, classification society records, and ship recycling facilities with experience working with similar ships.

#### 4.2.2 Assessment of collected information (Step 2)

The information collected in Step 1 above should be assessed. The assessment should cover all materials listed in Table A of appendix 1; materials listed in Table B should be listed as far as practicable. The results of the assessment should be reflected in the visual/sampling check plan.

#### 4.2.3 Preparation of visual/sampling check plan (Step 3)

To specify the materials listed in appendix 1 of these Guidelines a visual/sampling check plan should be prepared taking into account the collated information and any appropriate expertise. The visual/sampling check plan based on the following three lists:

- List of equipment, system and/or area for visual check (any equipment, system and/or area specified regarding the presence of the materials listed in appendix 1 by document analysis should be entered in the List of equipment, system and/or area for visual check);
- List of equipment, system and/or area for sampling check (any equipment, system and/or area which cannot be specified regarding the presence of the materials listed in appendix 1 by document or visual analysis should be entered in the List of equipment, system and/or area as requiring sampling check. A sampling check is the taking of samples to identify the presence or absence of Hazardous Material contained in the equipment, systems, and/or areas, by suitable and generally accepted methods such as laboratory analysis); and
- List of equipment, system and/or area classed as "potentially containing Hazardous Material" (any equipment, system and/or area which cannot be specified regarding the presence of the materials listed in appendix 1 by document analysis may be entered in the List of equipment, system and/or area classed as "potentially containing Hazardous Material" without the sampling check. The prerequisite for this classification is a comprehensible justification such as the impossibility of conducting sampling without compromising the safety of the ship and its operational efficiency).

Visual/sampling checkpoints should be all points where:

- the presence of materials to be considered for the Inventory Part I as listed in appendix 1 is likely;
- the documentation is not specific; or
- materials of uncertain composition were used.

#### 4.2.4 Onboard visual/sampling check (Step 4)

The onboard visual/sampling check should be carried out in accordance with the visual/sampling check plan. When a sampling check is carried out, samples should be taken and the sample points should be clearly marked on the ship plan and the sample results referenced. Materials of the same kind may be sampled in a representative manner. Such materials are to be checked to ensure that they are of the same kind. The sampling check should be carried out drawing upon expert assistance.

Any uncertainty regarding the presence of Hazardous Materials should be clarified by a visual/sampling check. Checkpoints should be documented in the ship's plan and may be supported by photographs.

If the equipment, system and/or area of the ship are not accessible for a visual check or sampling check, they should be classified as "potentially containing Hazardous Material". The prerequisite for such classification should be the same prerequisite as in section 4.2.3. Any equipment, system and/or area classed as "potentially containing Hazardous Material" may be investigated or subjected to a sampling check at the request of the shipowner during a later survey (e.g., during repair, refit or conversion).

#### 4.2.5 Preparation of Part I of the Inventory and related documentation (Step 5)

If any equipment, system and/or area is classed as either "containing Hazardous Material" or "potentially containing Hazardous Material", their approximate quantity and location should be listed in Part I of the Inventory. These two categories should be indicated separately in the remarks column of the Inventory of Hazardous Materials.

#### 4.2.6 Testing methods

Samples may be tested by a variety of methods. "Indicative" or "field tests" may be used when:

- the likelihood of a hazard is high;
- the test is expected to indicate that the hazard exists; and
- the sample is being tested by "specific testing" to show that the hazard is present.

Indicative or field tests are quick, inexpensive and useful onboard the ship or on site, but they cannot be accurately reproduced or repeated, and cannot identify the hazard specifically, and therefore cannot be relied upon except as "indicators".

In all other cases, and in order to avoid dispute, "specific testing" should be used. Specific tests are repeatable, reliable and can demonstrate definitively whether a hazard exists or not. They will also provide a known type of the hazard. The methods indicated are found qualitative and quantitative appropriate and only testing methods to the same effect can be used. Specific tests are to be carried out by a suitably accredited laboratory, working to international standards<sup>†</sup> or equivalent, which will provide a written report that can be relied upon by all parties.

Specific test methods for appendix 1 materials are provided in appendix 9.

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<sup>†</sup> For example ISO 17025.

#### 4.2.7 Diagram of the location of Hazardous Materials on board a ship

Preparation of a diagram showing the location of the materials listed in Table A is recommended in order to help Ship Recycling Facilities gain a visual understanding of the Inventory.

### 4.3 Maintaining and updating Part I of the Inventory during operations

4.3.1 Part I of the Inventory should be appropriately maintained and updated, especially after any repair or conversion or sale of a ship.

#### 4.3.2 Updating of Part I of the Inventory in the event of new installation

If any machinery or equipment is added to, removed or replaced or the hull coating is renewed, Part I of the Inventory should be updated according to the requirements for new ships as stipulated in subsections 4.1.2 to 4.1.4. Updating is not required if identical parts or coatings are installed or applied.

#### 4.3.3 Continuity of Part I of the Inventory

Part I of the Inventory should belong to the ship and the continuity and conformity of the information it contains should be confirmed, especially if the flag, owner or operator of the ship changes.

### 4.4 Development of Part II of the Inventory (operationally generated waste)

4.4.1 Once the decision to recycle a ship has been taken, Part II of the Inventory should be developed before the final survey, taking into account that a ship destined to be recycled shall conduct operations in the period prior to entering the Ship Recycling Facility in a manner that minimizes the amount of cargo residues, fuel oil and wastes remaining on board (regulation 8.2).

#### 4.4.2 Operationally generated wastes to be listed in the Inventory

If the wastes listed in Part II of the Inventory provided in "Table C (Potentially hazardous items)" of appendix 1 are intended for delivery with the ship to a Ship Recycling Facility, the quantity of the operationally generated wastes should be estimated and their approximate quantities and locations should be listed in Part II of the Inventory.

### 4.5 Development of Part III of the Inventory (stores)

4.5.1 Once the decision to recycle has been taken, Part III of the Inventory should be developed before the final survey, taking into account the fact that a ship destined to be recycled shall minimize the wastes remaining on board (regulation 8.2). Each item listed in Part III should correspond to the ship's operations during its last voyage.

#### 4.5.2 Stores to be listed in the Inventory

If the stores to be listed in Part III of the Inventory provided in Table C of appendix 1 are to be delivered with the ship to a Ship Recycling Facility, the unit (e.g., capacity of cans and cylinders), quantity and location of the stores should be listed in Part III of the Inventory.

#### 4.5.3 Liquids and gases sealed in ship's machinery and equipment to be listed in the Inventory

If any liquids and gases listed in Table C of appendix 1 are integral in machinery and equipment on board a ship, their approximate quantity and location should be listed in Part III of the Inventory. However, small amounts of lubricating oil, anti-seize compounds and grease which are applied to or injected into machinery and equipment to maintain normal performance do not fall within the scope of this provision. For subsequent completion of Part III of the Inventory during the recycling preparation processes, the quantity of liquids and gases listed in Table C of appendix 1 required for normal operation, including the related pipe system volumes, should be prepared and documented at the design and construction stage. This information belongs to the ship, and continuity of this information should be maintained if the flag, owner or operator of the ship changes.

#### 4.5.4 Regular consumable goods to be listed in the Inventory

Regular consumable goods, as provided in Table D of appendix 1 should not be listed in Part I or Part II but should be listed in Part III of the Inventory if they are to be delivered with the ship to a Ship Recycling Facility. A general description including the name of item (e.g., TV set), manufacturer, quantity and location should be entered in Part III of the Inventory. The check on materials provided for in paragraphs 4.1.2 and 4.1.3 of the Guidelines does not apply to regular consumable goods.

### 4.6 Description of location of Hazardous Materials on board

The locations of Hazardous Materials on board should be described and identified using the name of location (e.g., second floor of Engine-room, Bridge DK, APT, No.1 Cargo Tank, Frame number) given in the plans (e.g., General Arrangement, Fire and Safety Plan, Machinery Arrangement or Tank Arrangement).

### 4.7 Description of approximate quantity of Hazardous Materials

In order to identify the approximate quantity of Hazardous Materials, the standard unit used for the of Hazardous Materials should be kg, unless other units (e.g., m<sup>3</sup> for materials of liquid or gases, m<sup>2</sup> for materials used in floors or walls) are considered more appropriate. An approximate quantity should be rounded up to at least two significant figures.

## 5 Requirements for ascertaining the conformity of the Inventory

### 5.1 Design and construction stage

The conformity of Part I of the Inventory at the design and construction stage should be ascertained by reference to the collected "Supplier's Declaration of Conformity" described in section 7 and the related "Material Declarations" collected from suppliers.

### 5.2 Operational stage

Shipowners should implement the following measures in order to ensure the conformity of Part I of the Inventory:

- .1 designate a person as responsible for maintaining and updating the Inventory (the designated person may be employed ashore or on board);

- .2 the designated person, in order to implement subsection 4.3.2, should establish and supervise a system to ensure the necessary updating of the Inventory in the event of new installation;
- .3 to maintain the Inventory including dates of changes or new deleted entries and the signature of the designated person; and
- .4 provide related documents as required for the survey or sale of the ship.

## **6 Material Declaration**

### **6.1 General**

Suppliers to the shipbuilding industry should identify and declare whether or not the materials listed in Table A or Table B are present above the threshold level specified in appendix 1 of these Guidelines. However, this provision does not apply to chemicals which do not constitute a part of the finished product.

### **6.2 Information required in the declaration**

At a minimum the following information is required in the Material Declaration:

- .1 date of declaration;
- .2 Material Declaration identification number;
- .3 supplier's name;
- .4 product name (common product name or name used by manufacturer);
- .5 product number (for identification by manufacturer);
- .6 declaration of whether or not the materials listed in Table A and Table B of appendix 1 of these Guidelines are present in the product above the threshold level stipulated in appendix 1 of these Guidelines; and
- .7 mass of each constituent material listed in Table A and/or Table B of appendix 1 of these Guidelines if present above threshold level.

An example of a Material Declaration is shown in appendix 6.

## **7 Supplier's Declaration of Conformity**

### **7.1 Purpose and scope**

The purpose of the Supplier's Declaration of Conformity is to provide assurance that the related Material Declaration conforms to section 6.2, and to identify the responsible entity.

The Supplier's Declaration of Conformity remains valid as long as the products are present on board.

The supplier compiling the Supplier's Declaration of Conformity should establish a company policy<sup>‡</sup>. The company policy on the management of the chemical substances in products which the supplier manufactures or sells should cover:

.a Compliance with law:

The regulations and requirements governing the management of chemical substances in products should be clearly described in documents which should be kept and maintained; and

.b Obtaining of information on chemical substance content:

In procuring raw materials for components and products, suppliers should be selected following an evaluation, and the information on the chemical substances they supply should be obtained.

## 7.2 Contents and format

The Supplier's Declaration of Conformity should contain the following:

- .1 unique identification number;
- .2 name and contact address of the issuer;
- .3 identification of the subject of the Declaration of Conformity (e.g., name, type, model number, and/or other relevant supplementary information);
- .4 statement of conformity;
- .5 date and place of issue; and
- .6 signature (or equivalent sign of validation), name and function of the authorized person(s) acting on behalf of the issuer.

An example of the Supplier's Declaration of Conformity is shown in appendix 7.

## 8 List of appendices

- |             |   |
|-------------|---|
| Appendix 1: | Items to be listed in the Inventory of Hazardous Materials                        |
| Appendix 2: | Standard format of the Inventory of Hazardous Materials                           |
| Appendix 3: | Example of the development process for Part I of the Inventory for new ships      |
| Appendix 4: | Flow diagram for developing Part I of the Inventory for existing ships            |
| Appendix 5: | Example of the development process for Part I of the Inventory for existing ships |

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<sup>‡</sup> A recognized quality management system may be utilized.

- Appendix 6: Form of Material Declaration
- Appendix 7: Form of Supplier's Declaration of Conformity
- Appendix 8: Examples of Table A and Table B materials of appendix 1 with CAS-numbers
- Appendix 9: Specific test methods

**APPENDIX 1**

**ITEMS TO BE LISTED IN THE INVENTORY OF HAZARDOUS MATERIALS**

**TABLE A\*** Materials listed in appendix 1 of the Annex to the Convention

No.	Materials		Inventory			Threshold level
			Part I	Part II	Part III	
A-1	Asbestos		x			no threshold level
A-2	Polychlorinated biphenyls (PCBs)		x			no threshold level
A-3	Ozone Depleting Substances	CFCs	x			no threshold level
		Halons	x			
		Other fully halogenated CFCs	x			
		Carbon tetrachloride	x			
		1,1,1-Trichloroethane (Methyl chloroform)	x			
		Hydrochlorofluorocarbons	x			
		Hydrobromofluorocarbons	x			
		Methyl bromide	x			
	Bromochloromethane	x				
A-4	Anti-fouling systems containing organotin compounds as a biocide		x			2500 mg total tin/kg

**TABLE B\*** Materials listed in appendix 2 of the Annex to the Convention

No.	Materials		Inventory			Threshold level
			Part I	Part II	Part III	
B-1	Cadmium and cadmium compounds		x			100 mg/kg
B-2	Hexavalent chromium and hexavalent chromium compounds		x			1,000 mg/kg
B-3	Lead and lead compounds		x			1,000 mg/kg
B-4	Mercury and mercury compounds		x			1,000 mg/kg
B-5	Polybrominated biphenyl (PBBs)		x			1,000 mg/kg
B-6	Polybrominated diphenyl ethers (PBDEs)		x			1,000 mg/kg
B-7	Polychlorinated naphthalenes (more than 3 chlorine atoms)		x			no threshold level
B-8	Radioactive substances		x			no threshold level <sup>§</sup>
B-9	Certain shortchain chlorinated paraffins (Alkanes, C10-C13, chloro)		x			1%

\* For materials in this Table with no threshold level, quantities occurring as unintentional trace contaminants should not be listed in Material Declarations and in the Inventory.

§ However, note that, in order to identify amounts of radioactive substances which could be exempted from the need for regulatory control, "exemption criteria" were established in the IAEA Safety Standards (Safety Series No.115, International Basic Safety Standards for the Protection against Ionizing Radiation and for the Safety of Radiation Sources, Schedule I, p. 81-89; Vienna, 1996. IAEA is currently in the process of updating IAEA Safety Series No.115). For practical purposes, the IAEA defined values (e.g., "exemption levels") that could be considered as "thresholds" below which the substances could be automatically exempted from any control without further consideration. National Regulatory Authorities normally establish exemption levels for radioactive sources and other radioactive materials.



**TABLE C Potentially hazardous items**

No.	Properties		Goods	Inventory		
				Part I	Part II	Part III
C-1	Liquid	Oiliness	Kerosene			x
C-2			White spirit			x
C-3			Lubricating oil			x
C-4			Hydraulic oil			x
C-5			Anti-seize compounds			x
C-6			Fuel additive			x
C-7			Engine coolant additives			x
C-8			Antifreeze fluids			x
C-9			Boiler and feed water treatment and test re-agents			x
C-10			De-ioniser regenerating chemicals			x
C-11			Evaporator dosing and descaling acids			x
C-12			Paint stabilizers/rust stabilizers			x
C-13			Solvents/thinners			x
C-14			Paints			x
C-15			Chemical refrigerants			x
C-16			Battery electrolyte			x
C-17			Alcohol, methylated spirits			x
C-18	Gas	Explosives/ inflammables	Acetylene			x
C-19			Propane			x
C-20			Butane			x
C-21			Oxygen			x
C-22		Green House Gases	CO <sub>2</sub>			x
C-23			Perfluorocarbons (PFCs)			x
C-24			Methane			x
C-25			Hydrofluorocarbon (HFCs)			x
C-27			Nitrous oxide(N <sub>2</sub> O)			x
C-28			Sulfur hexafluoride (SF <sub>6</sub> )			x
C-29	Liquid	Oiliness	Bunkers: fuel oil			x
C-30			Grease			x
C-31			Waste oil (sludge)		x	
C-32			Bilge and/or waste water generated by the after-treatment systems fitted on machineries		x	
C-33			Oily liquid cargo tank residues		x	
C-34			Ballast water		x	
C-35			Raw sewage		x	
C-36			Treated sewage		x	
C-37			Non-oily liquid cargo residues		x	
C-38	Gas	Explosibility/ inflammability	Fuel gas			x

**TABLE C Potentially hazardous items**

No.	Properties	Goods	Inventory		
			Part I	Part II	Part III
C-39	Solid	Dry cargo residues		x	
C-40		Medical waste/infectious waste		x	
C-41		Incinerator ash <sup>2)</sup>		x	
C-42		Garbage <sup>2)</sup>		x	
C-43		Fuel tank residues		x	
C-45		Oily solid cargo tank residues		x	
C-45		Oily or chemical contaminated rags		x	
C-46		Batteries (incl. lead acid batteries)			x
C-47		Pesticides/insecticide sprays			x
C-48		Extinguishers			x
C-49		Chemical cleaner (incl. electrical equipment cleaner, carbon remover)			x
C-50		Detergent/bleacher (could be a liquid)			x
C-51		Miscellaneous medicines			x
C-52		Fire fighting clothing and Personal protective equipment			x
C-53		Dry tank residues		x	
C-54		Cargo residues		x	
C-55		Spare parts which contain materials listed in Table A or Table B			x

2) Definition of garbage is identical to that in MARPOL Annex V. However, incinerator ash is classified separately because it may include hazardous substances or heavy metals.

**TABLE D<sup>\*</sup> Regular consumable goods potentially containing Hazardous Materials**

No.	Properties	Example	Inventory		
			Part I	Part II	Part III
D-1	Domestic and accommodation appliances	Computers, refrigerators, printers, scanners, television sets, radio sets, video cameras, video recorders, telephones, consumer batteries, fluorescent lamps, filament bulbs, lamps			x

\* This Table does not include ship-specific equipment integral to ship operations, which has to be listed in Part I of the Inventory.

**APPENDIX 2**

**STANDARD FORMAT OF THE INVENTORY OF HAZARDOUS MATERIALS**

**Part I HAZARDOUS MATERIALS CONTAINED IN THE SHIP'S STRUCTURE AND EQUIPMENT**

**I-1 Paints and coating systems containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

No.	Application of paint	Name of paint	Location	Materials (classification in appendix 1)	Approx. quantity	Remarks
1	Anti-drumming compound	Primer, xx Co., xx primer #300	Hull part	Lead	35.00 kg	
2	Anti-fouling	xx Co., xx coat #100	Underwater parts	TBT	120.00 kg	

**I-2 Equipment and machinery containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
1	Switch board	Engine control room	Cadmium	Housing coating	0.02 kg	
			Mercury	Heat gauge	<0.01 kg	less than 0.01kg
2	<del>Diesel engine, xx Co., xx #150</del>	Engine room	Cadmium	Bearing	0.02 kg	
3	Diesel engine, xx Co., xx #200	Engine-room	Cadmium	Bearing	0.01 kg	Revised by XXX on Oct. XX, 2008
4	Diesel generator (x 3)	Engine-room	Lead	Ingredient of copper compounds	0.01 kg	

**I-3 Structure and hull containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

No.	Name of structural element	Location	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
1	Wall panel	Accommodation	Asbestos	Insulation	2,500.00 kg	
2	Wall insulation	Engine control room	Lead	Perforated plate	0.01 kg	cover for insulation material
			Asbestos	Insulation	25.00 kg	under perforated plates
3						

**Part II OPERATIONALLY GENERATED WASTE**

No.	Location <sup>1)</sup>	Name of item (classification in appendix 1) and detail (if any) of the item	Approx. quantity	Remarks
1	Garbage locker	Garbage (food waste)	35.00 kg	
2	Bilge tank	Bilgewater	15.00 m <sup>3</sup>	
3	No.1 cargo hold	Dry cargo residues (iron ore)	110.00 kg	
4	No.2 cargo hold	Waste oil (sludge) (crude)	120.00 kg	
5	No.1 ballast tank	Ballast water	2,500.00 m <sup>3</sup>	
		Sediments	250.00 kg	

**Part III STORES**

**III-1 Stores**

No.	Location <sup>1)</sup>	Name of item (classification in appendix 1)	Unit quantity	Figure	Approx. quantity	Remarks <sup>2)</sup>
1	No.1 fuel oil tank	Fuel oil (heavy fuel oil)	-	-	100.00 m <sup>3</sup>	
2	CO <sub>2</sub> room	CO <sub>2</sub>	100.00 kg	50 bottles	5,000.00 kg	
3	Workshop	Propane	20.00 kg	10 pcs	200.00 kg	
4	Medicine locker	Miscellaneous medicines	-	-	-	Details are shown in the attached list.
5	Paint stores	Paint, xx Co., #600	20.00 kg	5 pcs	100.00 kg	Cadmium containing.

**III-2 Liquids sealed in ship's machinery and equipment**

No.	Type of liquids (classification in appendix 1)	Name of machinery or equipment	Location	Approx. quantity	Remarks
1	Hydraulic oil	Deck crane hydraulic oil system	Upper deck	15.00 m <sup>3</sup>	
		Deck machinery hydraulic oil system	Upper deck and bosun store	200.00 m <sup>3</sup>	
		Steering gear hydraulic oil system	Steering gear room	0.55 m <sup>3</sup>	
2	Lubricating oil	Main engine system	Engine-room	0.45 m <sup>3</sup>	
3	Boiler water treatment	Boiler	Engine-room	0.20 m <sup>3</sup>	

**III-3 Gases sealed in ship's machinery and equipment**

No.	Type of gases (classification in appendix 1)	Name of machinery or equipment	Location	Approx. quantity	Remarks
1	HFC	AC system	AC room	100.00 kg	
2	HFC	Refrigerated provision chamber machine	AC room	50.00 kg	

**III-4 Regular consumable goods potentially containing Hazardous Materials**

No.	Location <sup>1)</sup>	Name of item	Quantity	Remarks
1	Accommodation	Refrigerators	1	
2	Accommodation	Personal computers	2	

- 1) The location of a Part II or Part III item should be entered in order based on its location, from a lower level to an upper level and from a fore part to an aft part. The location of Part I items is recommended to be described similarly, as far as practicable.
- 2) In column "Remarks" for Part III items, if Hazardous Materials are integrated in products, the approximate amount of the contents should be shown as far as possible.

## APPENDIX 3

### EXAMPLE OF THE DEVELOPMENT PROCESS FOR PART I OF THE INVENTORY FOR NEW SHIPS

#### 1 Objective of the typical example

This example has been developed to give guidance and to facilitate understanding of the development process for Part I of the Inventory of Hazardous Materials for new ships.

#### 2 Development flow for Part I of the Inventory

Part I of the Inventory should be developed using the following 3 steps. However, the order of these steps is flexible and can be changed depending on the schedule of shipbuilding:

- .1 collection of Hazardous Materials information;
- .2 utilization of Hazardous Materials information; and
- .3 preparation of the Inventory (by filling out standard format).

#### 3 Collection of Hazardous Materials information

##### 3.1 Data collection process for Hazardous Materials

Materials Declaration (MD) and Supplier's Declaration of Conformity (SDoC) for products from suppliers (tier 1 suppliers) should be requested and collected by the shipbuilding yard. Tier 1 suppliers may request from their suppliers (tier 2 suppliers) the relevant information if they cannot develop the MD based on the information available. Thus the collection of data on Hazardous Materials may involve the entire shipbuilding supply chain (Figure 1).

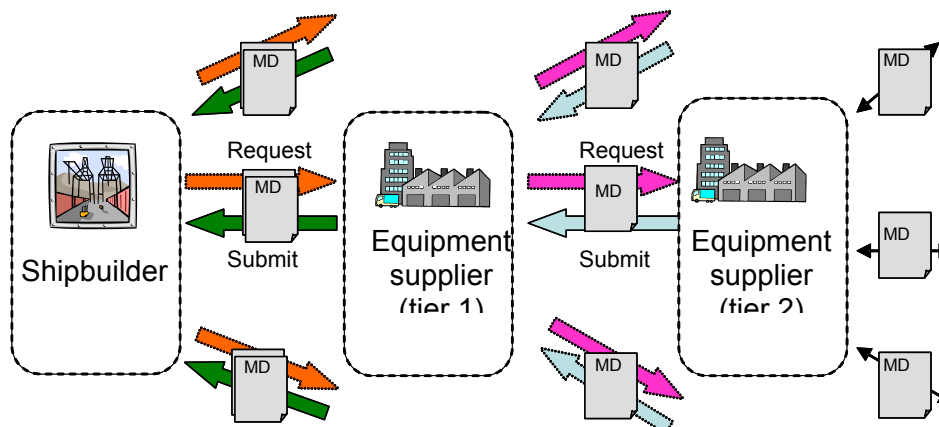


Figure 1 – Process of MD (and SDoC) collection showing involvement of supply chain

### 3.2 Declaration of Hazardous Materials

Suppliers should declare whether or not the Hazardous Materials listed in Table A and Table B in the MD are present in concentrations above the threshold levels specified for each "homogeneous material" in a product.

#### 3.2.1 Materials listed in Table A

If one or more materials listed in Table A are found to be present in concentrations above the specified threshold level according to the MD, the products which contain these materials shall not be installed on a ship. However, if the materials are used in a product in accordance with an exemption specified by the Convention (e.g., new installations containing hydrochlorofluorocarbons (HCFCs) before 1 January 2020), the product should be listed in the Inventory.

#### 3.2.2 Materials listed in Table B

If one or more materials listed in Table B are found to be present in concentrations above the specified threshold level according to the MD, the products should be listed in the Inventory.

### 3.3 Example of "Homogeneous Materials"

Figure 2 shows an example of four homogeneous materials which constitute a cable. In this case, sheath, intervention, insulator and conductor are all individual homogeneous materials.

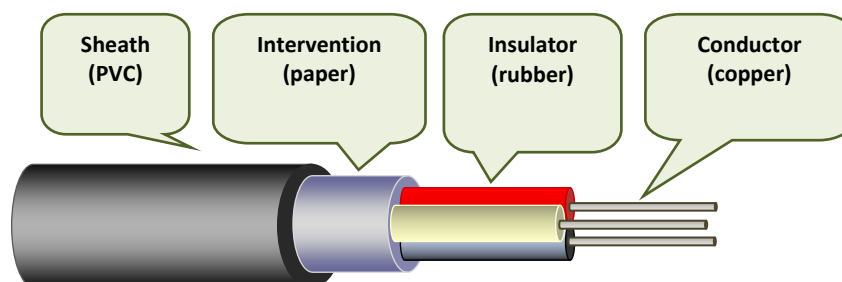


Figure 2 – Example of Homogeneous Materials (cable)

## 4 Utilization of Hazardous Materials information

Products which contain Hazardous Materials in concentrations above the specified threshold levels should be clearly identified in the MD. The approximate quantity of the Hazardous Materials should be calculated if the mass data for Hazardous Materials are declared in the MD using a unit which cannot be directly utilized in the Inventory.

## 5 Preparation of Inventory (by filling out standard format)

The information received for the Inventory, as contained in Table A and Table B of appendix 1 of these Guidelines, ought to be structured and utilized according to the following categorization for Part I of the Inventory:

- 1.1 Paints and coating systems;
- 1.2 Equipment and machinery; and
- 1.3 Structure and hull.



## 5.1 "Name of equipment and machinery" column

### 5.1.1 Equipment and machinery

The name of each equipment or machinery should be entered in this column. If more than one Hazardous Material is present in the equipment or machinery, the row relating to that equipment or machinery should be appropriately divided such that all of the Hazardous Materials contained in the piece of equipment or machinery are entered. If more than one item of equipment or machinery is situated in one location, both name and quantity of the equipment or machinery should be entered in the column. For identical common or mass-produced items, such as bolts, nuts and valves, there is no need to list each item individually. An example is shown in Table 1.

**Table 1 – Example showing more than one item of equipment or machinery situated in one location**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
	Main engine	Engine-room	Lead	Piston pin bush	0.75 kg	
			Mercury	Thermometer charge air temperature	0.01 kg	
	Diesel generator (x 3)	Engine-room	Mercury	Thermometer	0.03	

### 5.1.2 Pipes and cables

The names of pipes and of systems, including electric cables, which are often situated in more than one compartment of a ship, should be described using the name of the system concerned.

A reference to the compartments where these systems are located is not necessary as long as the system is clearly identified and properly named.

## 5.2 "Approximate quantity" column

The standard unit for approximate quantity of solid Hazardous Materials should be kg. If the Hazardous Materials are liquids or gases, the standard unit should be either m<sup>3</sup> or kg. An approximate quantity should be rounded up to at least two significant figures. If the Hazardous Material is less than 10 g, the description of the quantity should read "<0.01 kg".

**Table 2 – Example of a switchboard**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
	Switchboard	Engine control room	Cadmium	Housing coating	0.02 kg	
			Mercury	Heat gauge	<0.01 kg	less than 0.01 kg

### 5.3 "Location" column

#### 5.3.1 Example of a location list

It is recommended to prepare a location list which covers all compartments of a ship based on the ship's plans (e.g., General Arrangement, Engine-room Arrangement, Accommodation and Tank Plan) and on other documentation on board, including certificates or spare parts' lists. The description of the location should be based on a location such as a deck or room to enable easy identification. The name of the location should correspond to the ship's plans so as to ensure consistency between the Inventory and the ship's plans. Examples of names of locations are shown in Table 3.

**Table 3 – Examples of location names**

(A) Primary classification	(B) Secondary classification	(C) Name of location
All over the ship		
Hull part	Fore part	Bosun store
		...
	Cargo part	No.1 Cargo Hold/Tank
		No.1 Garage deck
		...
	Tank part	Fore Peak Tank
		No.1 WBT
		No.1 FOT
		...
		Aft Peak Tank
	Aft part	Steering Gear Room
		Emergency Fire Pump Space
		...
	Superstructure	Accommodation
		Compass deck
		Nav. Bridge deck
		...
		Wheel House
		Engine Control Room
		Cargo Control Room
...		
Deck house	Deck House	
	...	

(A) Primary classification	(B) Secondary classification	(C) Name of location
Machinery part	Engine-room	Engine-room
		Main Floor
		2nd Floor
		...
		Generator Space/Room
		Purifier Space/Room
		Shaft Space/Room
		Engine Casing
		Funnel
		Engine Control Room
	...	
	Pump-room	Pump-room
Exterior part	Superstructure	Superstructure
	Upper deck	Upper deck
	Hull shell	Hull shell
		bottom
		under waterline
	...	

### 5.3.2 Description of location of pipes and electrical systems

Locations of pipes and systems, including electrical systems and cables situated in more than one compartment of a ship, should be described for each system concerned. If they are situated in a number of compartments, the most practical of the following two options should be used:

- a) listing of all components in the column; or
- b) description of the location of the system using an expression such as those shown under "primary classification" and "secondary classification" in Table 3.

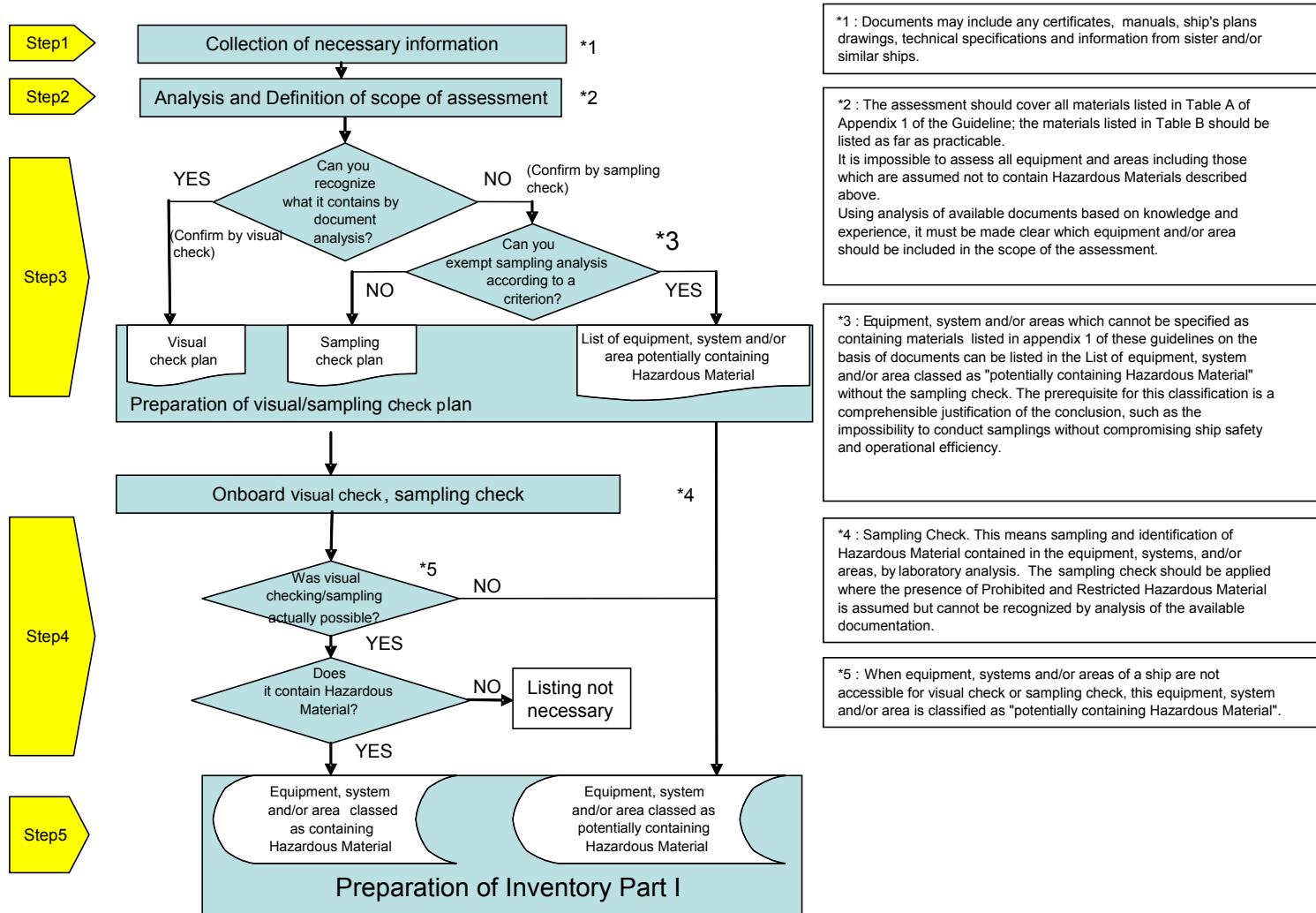
A typical description of a pipe system is shown in Table 4.

**Table 4 – Example of description of a pipe system**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
	Ballast water system	Engine-room, Hold parts			⋮	

APPENDIX 4

FLOW DIAGRAM FOR DEVELOPING PART I OF THE INVENTORY FOR EXISTING SHIPS



## APPENDIX 5

### EXAMPLE OF THE DEVELOPMENT PROCESS FOR PART I OF THE INVENTORY FOR EXISTING SHIPS

#### 1 Introduction

In order to develop Part I of the Inventory of Hazardous Materials for existing ships, documents of the individual ship as well as the knowledge and experience of specialist personnel (experts) is required. An example of the development process for Part I of the Inventory of Hazardous Materials for existing ships is useful to understand the basic steps as laid out in the Guidelines and to ensure a unified application. However, attention should be paid to variations in different types of ships<sup>1)</sup>.

Compilation of Part I of the Inventory of Hazardous Material for existing ships involves the following 5 steps which are described in paragraph 4.2 and appendix 4 of these Guidelines.

- Step 1: Collection of necessary information;
- Step 2: Assessment of collected information;
- Step 3: Preparation of visual/sampling check plan;
- Step 4: Onboard visual/sampling check; and
- Step 5: Preparation of Part I of the Inventory and related documentation.

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<sup>1)</sup> The example of a 28,000 gross tonnage bulk carrier constructed in 1985 is used in this appendix.

#### 2 Step 1: Collection of necessary information

##### 2.1 Sighting of available documents

A practical first step is to collect detailed documents for the ship. The shipowner should try to collate documents normally retained onboard the ship or by the shipping company as well as relevant documents that the shipyard, manufacturers, or classification society may have. The following documents should be used when available:

- Ship's specification
- General Arrangement
- Machinery Arrangement
- Spare Parts and Tools List
- Piping Arrangement
- Accommodation Plan
- Fire Control Plan
- Fire Protection Plan
- Insulation Plan (Hull and Machinery)
- International Anti-Fouling System Certificate
- Related manuals and drawings
- Information from other inventories and/or sister or similar ships, machinery, equipment, materials and coatings
- Results of previous visual/sampling checks and other analysis

If the ship has undergone conversions or major repair work, it is necessary to identify as far as possible the modifications from the initial design and specification of the ship.

## 2.2 Indicative list

It is impossible to check all equipment, systems, and/or areas on board the ship to determine the presence or absence of Hazardous Materials. The total number of parts on board may exceed several thousand. In order to take a practical approach, an "Indicative list" should be prepared that identifies the equipment, system, and/or area on board that is presumed to contain Hazardous Materials. Field interviews with the shipyard and suppliers may be necessary to prepare such lists. A typical example of an "Indicative list" is shown below:

### 2.2.1 Materials to be checked and documented

Hazardous Materials, as identified in appendix 1 of these Guidelines, should be listed in Part I of the Inventory for existing ships. Appendix 1 of the Guidelines contains all the materials concerned. Table A shows those which are required to be listed and Table B shows those which should be listed as far as practical.

### 2.2.2 Materials listed in Table A

Table A lists the following four materials:

- Asbestos
- Polychlorinated biphenyls (PCBs)
- Ozone depleting substances
- Anti-fouling systems containing organotin compounds as a biocide

#### 2.2.2.1 Asbestos

Field interviews were conducted with over 200 Japanese shipyards and suppliers regarding the use of asbestos in production. "Indicative lists" for asbestos developed on the basis of this research are shown below:

Structure and/or equipment	Component
Propeller shafting	Packing with low pressure hydraulic piping flange
	Packing with casing
	Clutch
	Brake lining
	Synthetic stern tubes
Diesel engine	Packing with piping flange
	Lagging material for fuel pipe
	Lagging material for exhaust pipe
	Lagging material turbocharger
Turbine engine	Lagging material for casing
	Packing with flange of piping and valve for steam line, exhaust line and drain line
	Lagging material for piping and valve of steam line, exhaust line and drain line

Structure and/or equipment	Component
Boiler	Insulation in combustion chamber
	Packing for casing door
	Lagging material for exhaust pipe
	Gasket for manhole
	Gasket for hand hole
	Gas shield packing for soot blower and other hole
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Exhaust gas economizer	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Gas shield packing for soot blower
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Incinerator	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Lagging material for exhaust pipe
Auxiliary machinery (pump, compressor, oil purifier, crane)	Packing for casing door and valve
	Gland packing
	Brake lining
Heat exchanger	Packing with casing
	Gland packing for valve
	Lagging material and insulation
Valve	Gland packing with valve, sheet packing with piping flange
	Gasket with flange of high pressure and/or high temperature
Pipe, duct	Lagging material and insulation
Tank (fuel tank, hot water, tank, condenser), other equipments (fuel strainer, lubricant oil strainer)	Lagging material and insulation
Electric equipment	Insulation material
Airborne asbestos	Wall, ceiling
Ceiling, floor and wall in accommodation area	Ceiling, floor, wall
Fire door	Packing, construction and insulation of the fire door
Inert gas system	Packing for casing, etc.
Air-conditioning system	Sheet packing, lagging material for piping and flexible joint

Structure and/or equipment	Component
Miscellaneous	Ropes Thermal insulating materials Fire shields/fire proofing Space/duct insulation Electrical cable materials Brake linings Floor tiles/deck underlay Steam/water/vent flange gaskets Adhesives/mastics/fillers Sound damping Moulded plastic products Sealing putty Shaft/valve packing Electrical bulkhead penetration packing Circuit breaker arc chutes Pipe hanger inserts Weld shop protectors/burn covers Fire-fighting blankets/clothing/equipment Concrete ballast

### 2.2.2.2 Polychlorinated biphenyl (PCBs)

Worldwide restriction of PCBs began on 17 May 2004 as a result of the implementation of the Stockholm Convention, which aims to eliminate or restrict the production and use of persistent organic pollutants. In Japan, domestic control began in 1973, with the prohibition of all activities relating to the production, use and import of PCBs. Japanese suppliers can provide accurate information concerning their products. The "Indicative list" of PCBs has been developed as shown below:

Equipment	Component of equipment
Transformer	Insulating oil
Condenser	Insulating oil
Fuel heater	Heating medium
Electric cable	Covering, insulating tape
Lubricating oil	
Heat oil	Thermometers, sensors, indicators
Rubber/felt gaskets	
Rubber hose	
Plastic foam insulation	
Thermal insulating materials	
Voltage regulators	
Switches/reclosers/bushings	
Electromagnets	
Adhesives/tapes	
Surface contamination of machinery	
Oil-based paint	
Caulking	
Rubber isolation mounts	
Pipe hangers	



Equipment	Component of equipment
Light ballasts (component within fluorescent light fixtures)	
Plasticizers	
Felt under septum plates on top of hull bottom	

### 2.2.2.3 Ozone depleting substances

The "Indicative list" for Ozone depleting substances is shown below. Ozone depleting substances have been controlled according to the Montreal Protocol and MARPOL Convention. Although almost all substances have been banned since 1996, HCFC can still be used until 2020.

Materials	Component of equipment	Period for use of ODS in Japan
CFCs (R11, R12)	Refrigerant for refrigerators	Until 1996
CFCs	Urethane formed material	Until 1996
	Blowing agent for insulation of LNG carriers	Until 1996
Halons	Extinguishing agent	Until 1994
Other fully halogenated CFCs	The possibility of usage in ships is low	Until 1996
Carbon tetrachloride	The possibility of usage in ships is low	Until 1996
1,1,1-Trichloroethane (Methyl chloroform)	The possibility of usage in ships is low	Until 1996
HCFC (R22, R141b)	Refrigerant for refrigerating machine	It is possible to use it until 2020
HBFC	The possibility of usage in ships is low	Until 1996
Methyl bromide	The possibility of usage in ships is low	Until 2005

### 2.2.2.4 Organotin compounds

Organotin compounds include Tributyl tins (TBT), Triphenyl tins (TPT) and Tributyl tin oxide (TBTO). Organotin compounds have been used as anti-fouling paint on ships' bottoms and the International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS Convention) stipulates that all ships shall not apply or re-apply organotin compounds after 1 January 2003, and that, after 1 January 2008, all ships shall either not bear such compounds on their hulls or shall bear a coating that forms a barrier preventing such compounds from leaching into the sea. The above-mentioned dates may have been extended by permission of the Administration bearing in mind that the AFS Convention entered into force on 17 September 2008.

### 2.2.3 Materials listed in Table B

For existing ships it is not obligatory for materials listed in Table B to be listed in Part I of the Inventory. However, if they can be identified in a practical way, they should be listed in the Inventory, because the information will be used to support ship recycling processes. The Indicative list of materials listed in Table B is shown below:

Materials	Component of equipment
Cadmium and cadmium compounds	Nickel-cadmium battery, plating film, bearing
Hexavalent chromium compounds	Plating film
Mercury and mercury compounds	Fluorescent light, mercury lamp, mercury cell, liquid-level switch, gyro compass, thermometer, measuring tool, manganese cell, pressure sensors, light fittings, electrical switches, fire detectors
Lead and lead compounds	Lead-acid storage battery, corrosion-resistant primer, solder (almost all electric appliances contain solder), paints, preservative coatings, cable insulation, lead ballast, generators
Polybrominated biphenyls (PBBs)	Non-flammable plastics
Polybrominated diphenyl ethers (PBDE)	Non-flammable plastics
Polychlorinated naphthalenes	Paint, lubricating oil
Radioactive substances	Fluorescent paint, ionic type smoke detector, level gauge
Certain shortchain chlorinated paraffins	Non-flammable plastics

### 3 Step 2: Assessment of collected information

Preparation of a checklist is an efficient method for developing the Inventory for existing ships in order to clarify the results of each step. Based on collected information including the "Indicative list" mentioned in Step 1, all equipment, systems, and/or areas onboard assumed to contain Hazardous Materials listed in Tables A and B should be included in the checklist. Each listed equipment, system, and/or area on board should be analysed and assessed for its Hazardous Materials content.

The existence and volume of Hazardous Materials may be judged and calculated from the Spare parts and tools list and the Maker's drawings. The existence of asbestos contained in floors, ceilings and walls may be identified from Fire Protection Plans, while the existence of TBT in coatings can be identified from the International Anti-Fouling System Certificate, Coating scheme and the History of Paint.

#### Example of weight calculation

No.	Hazardous Materials	Location/Equipment/Component	Reference	Calculation
1.1-2	TBT	Flat bottom/paint	History of coatings	
1.2-1	Asbestos	Main engine/ Exh. pipe packing	Spare parts and tools list	250 g x 14 sheet = 3.50 kg
1.2-3	HCFC	Ref. provision plant	Maker's drawings	20 kg x 1 cylinder = 20 kg
1.2-4	Lead	Batteries	Maker's drawings	6 kg x 16 unit = 96 kg
1.3-1	Asbestos	Engine-room ceiling	Accommodation plan	

When a component or coating is determined to contain Hazardous Materials, a "Y" should be entered in the column for "Result of document analysis" in the checklist, to denote "Contained". Likewise, when an item is determined not to contain Hazardous Materials, the entry "N" should be made in the column to denote "Not contained". When a determination cannot be made as to the Hazardous Materials content, the column should be completed with the entry "Unknown".

Checklist (Step 2)

ANALYSIS AND DEFINITION OF SCOPE OF ASSESSMENT FOR "SAMPLE SHIP"

No.	Tbl A/B	Hazardous Materials *1	Location	Name of equipment	Component	Quantity			Manufacturer/brand name	Result of DOC #2	Procedure of check *3	Result of check *4	Reference/DWG No.
						Unit (kg)	No.	Total (kg)					
Inventory Part I-1													
1	A	TBT	Top side	Painting & coating	A/F paints			NIL	Paints Co./marine P1000	N			On Aug. 200X, sealer coat applied to all over submerged area before tin free coating.
2	A	TBT	Flat bottom					3000m <sup>2</sup>		Unknown AF	Unknown		
Inventory Part I-2													
1	A	Asbestos	Lower deck	Main engine	Exh. pipe packing	0.25	14		Diesel Co.	Y			M-100
2	A	Asbestos	3rd deck	Aux. boiler	Lagging		12		Unknown lagging	Unknown			M-300
3	A	Asbestos	Engine room	Piping/flange	Packing					PCHM			
4	A	HCFC	2nd deck	Ref. provision plant	Refrigerant (R22)	20.00	1		Reito Co.	Y			Maker's dwg
5	B	Lead	Nav. Br. deck	Batteries		6	16		Denchi Co.	Y			E-300
Inventory Part I-3													
1	A	Asbestos	Upper deck	Back deck ceilings	Engine room ceiling		20m <sup>2</sup>		Unknown ceiling	Unknown			O-25

Notes

- \*1 Hazardous Materials: Material classification
- \*2 Result of documents analysis: Y=Contained, N=Not contained, Unknown, PCHM=potentially containing Hazardous Material.
- \*3 Procedure of check: V=Visual check, S=Sampling check
- \*4 Result of check: Y=Contained, N=Not contained, PCHM

#### **4 Step 3: Preparation of visual/sampling check plan**

Each item classified as "Contained" or "Not contained" in Step 2 should be subjected to a visual check on board, and the entry "V" should be made in the "Check procedure" column to denote "Visual check".

For each item categorized as "unknown", a decision should be made as to whether to apply a sampling check. However, any item categorized as "unknown" may be classed as "potentially containing Hazardous Material" provided comprehensive justification is given, or if it can be assumed that there will be little or no effect on disassembly as a unit and later ship recycling and disposal operations. For example, in the following checklist, in order to carry out a sampling check for "Packing with aux. boiler" the shipowner needs to disassemble the auxiliary boiler in a repair yard. The costs of this check are significantly higher than the later disposal costs at a Ship Recycling Facility. In this case, therefore, the classification as "potentially containing Hazardous Material" is justifiable.

**Checklist (Step 3)**

**ANALYSIS AND DEFINITION OF SCOPE OF ASSESSMENT FOR "SAMPLE SHIP"**

No.	Tbl A/B	Hazardous Materials *1	Location	Name of Equipment	Component	Quantity			Manufacturer / Brand name	Result of DOC *2	Procedure of check *3	Result of check *4	Reference/DWG No.
						Unit (kg)	No.	Total (kg)					
Inventory Part I-1													
1	A	TBT	Top side	Painting & coating	A/F paints			NIL	Paints Co./marine P1000	N	V		On Aug. 200X, sealer coat applied to all over submerged area before tin free coating.
2	A	TBT	Flat bottom					3000m <sup>2</sup>		Unknown AF	Unknown	S	
Inventory Part I-2													
1	A	Asbestos	Lower deck	Main engine	Exh. pipe packing	0.25	14		Diesel Co.	Y	V		M-100
2	A	Asbestos	3rd deck	Aux. boiler	Lagging		12		Unknown lagging	Unknown	S		M-300
3	A	Asbestos	Engine room	Piping/flange	Packing					PCHM	V		
4	A	HCFC	2nd deck	Ref. provision plant	Refrigerant (R22)	20.00	1		Reito Co.	Y	V		Maker's dwg
5	B	Lead	Nav. Br. deck	Batteries		6	16		Denchi Co.	Y	V		E-300
Inventory Part I-3													
1	A	Asbestos	Upper deck	Back deck ceilings	Engine room ceiling		20m <sup>2</sup>		Unknown ceiling	Unknown	S		O-25

**Notes**

- \*1 Hazardous Materials: Material classification
- \*2 Result of documents analysis: Y=Contained, N=Not contained, Unknown, PCHM=potentially containing Hazardous Material
- \*3 Procedure of check: V=Visual check, S=Sampling check
- \*4 Result of check: Y=Contained, N=Not contained, PCHM

Before any visual/sampling check on board is conducted, a "visual/sampling check plan" should be prepared. An example of such a plan is shown below.

To prevent any incidents during the visual/sampling check, a schedule should be established to eliminate interference with other ongoing work on board. To prevent potential exposure to Hazardous Materials during the visual/sampling check, safety precautions should be in place on board. For example, sampling of potential asbestos containing materials could release fibres into the atmosphere. Therefore, appropriate personnel safety and containment procedures should be implemented prior to sampling.

Items listed in the visual/sampling check should be arranged in sequence so that the onboard check is conducted in a structured manner (e.g., from a lower level to an upper level and from a fore part to an aft part).

### Example of visual/sampling check plan

Name of ship	XXXXXXXXXX
IMO Number	XXXXXXXXXX
Gross Tonnage	28,000 GT
L x B x D	xxx.xx × xx.xx × xx.xx m
Date of delivery	dd.mm.1987
Shipowner	XXXXXXXXXX
Contact point (Tel.,Fax, E-mail, address)	XXXXXXXXXX Tel: XXXX-XXXX Fax: XXXX-XXXX E-mail: abcdefg@hijk.co.net
Check schedule	Visual check : dd, mm, 20XX Sampling check : dd, mm, 20XX
Site of check	XX shipyard, No. Dock
In charge of check	XXXX XXXX
Check engineer	XXXX XXXX, YYYY YYYY, ZZZZ ZZZZ
Sampling engineer	Person with specialized knowledge of sampling
Sampling method and anti-scattering measure for asbestos	Wet the sampling location prior to cutting and allow it to harden after cutting to prevent scatter. Notes: Workers performing sampling activities shall wear protective equipment.
Sampling of fragments of paints	Paints suspected to contain TBT should be collected and analysed from load line, directly under bilge keel and flat bottom near amidships.
Laboratory	QQQQ QQQQ
Chemical analysis method	Method by ISO/DIS 22262-1 Bulk materials--Part 1: Sampling and qualitative determination of asbestos in commercial bulk materials and ISO/CD 22262-2 Bulk materials – Part 2: Quantitative determination of asbestos by gravimetric and microscopic methods. ICP Luminous analysis (TBT)
Location of visual/sampling check	Refer to lists for visual/sampling check

Listing for equipment, system and/or area for visual check				
See attached "Analysis and definition of scope of investigation for sample ship"				

List of equipment, system and/or area for sampling check				
Location	Equipment, machinery and/or zone	Name of parts	Materials	Result of doc. checking
Upper Deck	Back deck ceilings	Engine-room ceiling	Asbestos	Unknown
Engine-room	Exhaust gas pipe	Insulation	Asbestos	Unknown
Engine-room	Pipe/flange	Gasket	Asbestos	Unknown
Refer to attached "Analysis and definition of scope of investigation for sample ship" and "Location plan of Hazardous Materials for sample ship"				

List of equipment, system and/or area classed as PCHM				
Location	Equipment, machinery and/or zone	Name of part	Material	Result of doc. checking
Floor	Propeller cap	Gasket	Asbestos	PCHM
Engine-room	Air operated shut-off valve	Gland packing	Asbestos	PCHM
Refer to attached "Analysis and definition of scope of investigation for sample ship" and "Location plan of Hazardous Materials for sample ship"				

This plan is established in accordance with the Guidelines for the development of the Inventory of Hazardous Materials

Prepared by : XXXX XXXX

Tel. : YYYY-YYYY

E-Mail : XXXX@ZZZZ.co.net

- Document check • date/place:  
dd, mm, 20XX at XX Lines Co. Ltd.
- Preparation date of plan: dd. mm, 20XX

## **5 Step 4: Onboard visual/sampling check**

The visual/sampling check should be conducted according to the plan. Check points should be marked in the ship's plan or recorded with photographs.

A person taking samples should be protected by the appropriate safety equipment relevant to the suspected type of hazardous materials encountered. Appropriate safety precautions should also be in place for passengers, crewmembers and other persons on board, to minimize the potential exposure to hazardous materials. Safety precautions could include the posting of signs or other verbal or written notification for personnel to avoid such areas during sampling. The personnel taking samples should ensure compliance with relevant national regulations.

The results of visual/sampling checks should be recorded in the checklist. Any equipment, systems and/or areas of the ship that cannot be accessed for checks should be classified as "potentially containing Hazardous Material". In this case, the entry in the "Result of check" column should be "PCHM".

## **6 Step 5: Preparation of Part I of the Inventory and related documentation**

### **6.1 Development of Part I of the Inventory**

The results of the check and the estimated quantity of Hazardous Materials should be recorded on the checklist. Part I of the Inventory should be developed with reference to the checklist.

### **6.2 Development of location diagram of Hazardous Materials**

With respect to Part I of the Inventory, the development of a location diagram of Hazardous Materials is recommended in order to help the Ship Recycling Facility gain a visual understanding of the Inventory.



**Checklist (Step 4 and Step 5)**

**ANALYSIS AND DEFINITION OF SCOPE OF ASSESSMENT FOR "SAMPLE SHIP"**

No.	Tbl A/B	Hazardous Materials *1	Location	Name of equipment	Component	Quantity			Manufacturer/brand name	Result of DOC #2	Procedure of check #3	Result of check #4	Reference/DWG No.
						Unit (kg)	No.	Total (kg)					
Inventory Part I-1													
1	A	TBT	Top side	Painting & coating	A/F paints			NIL	Paints Co./marine P1000	N	V	N	On Aug. 200X, sealer coat applied to all over submerged area before tin free coating.
2	A	TBT	Flat bottom			0.02	3000m <sup>2</sup>	60.00	Unknown AF	Unknown	S	Y	
Inventory Part I-2													
1	A	Asbestos	Lower deck	Main engine	Exh. pipe packing	0.25	14	3.50	Diesel Co.	Y	V	Y	M-100
2	A	Asbestos	3rd deck	Aux. boiler	Lagging		12		Unknown lagging	Unknown	S	N	M-300
3	A	Asbestos	Engine room	Piping/flange	Packing					PCHM	V	PCHM	
4	A	HCFC	2nd deck	Ref. provision plant	Refrigerant (R22)	20.00	1	20.00	Reito Co.	Y	V	Y	Maker's dwg
5	B	Lead	Nav. Br. deck	Batteries		6	16	96.00	Denchi Co.	Y	V	Y	E-300
Inventory Part I-3													
1	A	Asbestos	Upper deck	Back deck ceilings	Engine room ceiling	0.19	20m <sup>2</sup>	3.80	Unknown ceiling	Unknown	S	Y	O-25

Notes

- \*1 Hazardous Materials: Material classification
- \*2 Result of documents analysis: Y=Contained, N=Not contained, Unknown, PCHM=potentially containing Hazardous Material
- \*3 Procedure of check: V=Visual check, S=Sampling check
- \*4 Result of check: Y=Contained, N=Not contained, PCHM

**Example of the Inventory for existing ships**

**Inventory of Hazardous Materials  
for "Sample Ship"**

Particulars of the "Sample Ship"

Distinctive number or letters	XXXXNNN
Port of registry	Port of World
Type of vessel	Bulk carrier
Gross Tonnage	28,000 GT
IMO number	NNNNNNN
Name of shipbuilder	xx Shipbuilding Co. Ltd
Name of shipowner	yy Maritime SA
Date of delivery	MM/DD/1988

This inventory was developed in accordance with the Guidelines for the development of the Inventory of Hazardous Materials.

Attachment:

- 1: Inventory of Hazardous Materials
- 2: Assessment of collected information
- 3: Location diagram of Hazardous Materials

\* Prepared by XYZ (Name & address)(mm/dd/20XX)

**Inventory of Hazardous Materials: "Sample Ship"**

**Part I HAZARDOUS MATERIALS CONTAINED IN THE SHIP'S STRUCTURE AND EQUIPMENT**

**I-1 Paints and coating systems containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

No	Application of paint	Name of paint	Location *1	Materials (classification in appendix 1)	Approx. quantity	Remarks
1	AF paint	Unknown paints	Flat bottom	TBT	60.00 kg	Confirmed by sampling
2						
3						

**I-2 Equipment and machinery containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

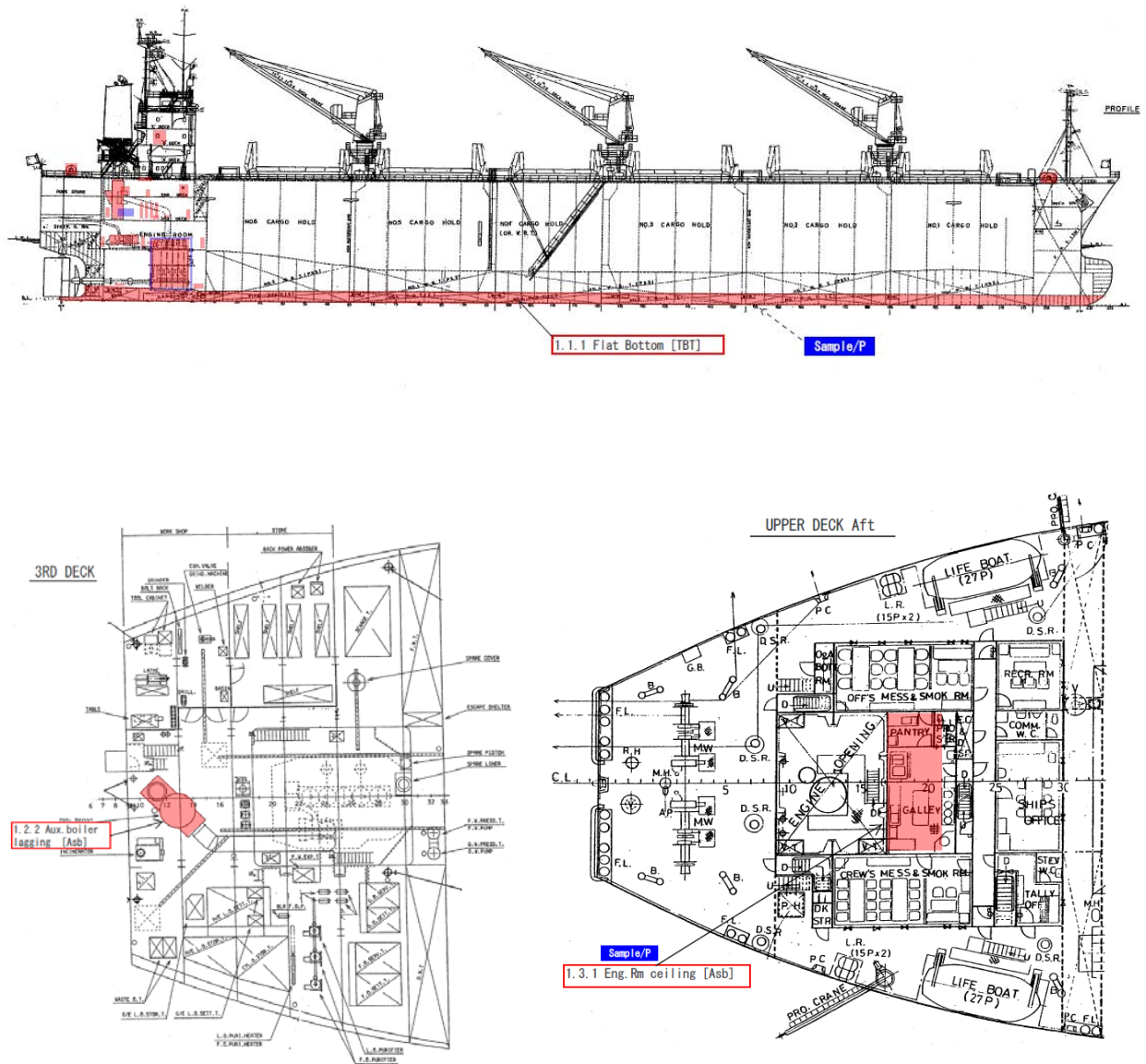
No	Name of equipment and machinery	Location *1	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
1	Main engine	Lower floor	Asbestos	Exh. pipe packing	3.50 kg	
2	Aux. boiler	3rd deck	Asbestos	Unknown packing	10.00 kg	PCHM (potentially containing Hazardous Material)
3	Piping/flange	Engine-room	Asbestos	Packing	50.00 kg	PCHM
4	Ref. provision plant	2nd deck	HCFC	Refrigerant (R22)	20.00 kg	
5	Batteries	Navig. Bridge deck	Lead		96.00 kg	

**I-3 Structure and hull containing materials listed in Table A and Table B of appendix 1 of the Guidelines**

No	Name of structural element	Location *1	Materials (classification in appendix 1)	Parts where used	Approx. quantity	Remarks
1	Back deck ceiling	Upper deck	Asbestos	Engine-room ceiling (A class)	3.80 kg	Confirmed by sampling
2						
3						

\*1 Each item should be entered in order based on its location, from a lower level to an upper level and from a fore part to an aft part.

### Example of location diagram of Hazardous Materials



APPENDIX 6

FORM OF MATERIAL DECLARATION

<Date of declaration>

Date	
------	--

<MD ID number>

MD- ID-No.	
------------	--

<Supplier (respondent) information>

Company name	
Division name	
Address	
Contact person	
Telephone number	
Fax number	
E-mail address	
SDoC ID no.:	

<Other information>

Remark 1	
Remark 2	
Remark 3	

<Product information>

Product name	Product number	Delivered unit		Product information
		Amount	Unit	

<Materials information>

This materials information shows the amount of hazardous materials contained in 

1	Unit
---	------

 (unit: piece, kg, m, m<sup>2</sup>, m<sup>3</sup>, etc) of the product.

Table	Material name		Threshold level	Present above threshold level	If yes, material mass		If yes, information on where it is used
				Yes / No	Mass	Unit	
Table A (materials listed in appendix 1 of the Convention)	Asbestos	Asbestos	no threshold level				
	Polychlorinated biphenyls (PCBs)	Polychlorinated biphenyls (PCBs)	no threshold level				
	Ozone depleting substance	Chlorofluorocarbons (CFCs)	no threshold level				
		Halons					
		Other fully halogenated CFCs					
		Carbon tetrachloride					
		1,1,1-Trichloroethane					
		Hydrochlorofluorocarbons					
		Hydrobromofluorocarbons					
	Anti-fouling systems containing organotin compounds as a biocide		2,500 mg total tin/kg				

Table	Material name		Threshold level	Present above threshold level	If yes, material mass		If yes, information on where it is used
				Yes / No	Mass	Unit	
Table B (materials listed in appendix 2 of the Convention)	Cadmium and cadmium compounds		100 mg/kg				
	Hexavalent chromium and hexavalent chromium compounds		1,000 mg/kg				
	Lead and lead compounds		1,000 mg/kg				
	Mercury and mercury compounds		1,000 mg/kg				
	Polybrominated biphenyl (PBBs)		1,000 mg/kg				
	Polybrominated dephenyl ethers (PBDEs)		1,000 mg/kg				
	Polychloronaphthalenes (Cl >= 3)		no threshold level				
	Radioactive substances		no threshold level				
Certain shortchain chlorinated paraffins		1%					

**APPENDIX 7**

**FORM OF SUPPLIER'S DECLARATION OF CONFORMITY**

**Supplier's Declaration of Conformity for Material Declaration management**

1) Identification number: \_\_\_\_\_

2) Issuer's name: \_\_\_\_\_

Issuer's address: \_\_\_\_\_

3) Object(s) of the declaration: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4) The object(s) of the declaration described above is in conformity with the following documents :

Document No.:	Title:	Edition/date of issue
---------------	--------	-----------------------

5) _____	_____	_____
----------	-------	-------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

6) Additional information : \_\_\_\_\_

\_\_\_\_\_

Signed for and on behalf of:

\_\_\_\_\_

\_\_\_\_\_

(Place and date of issue)

7) \_\_\_\_\_

(Name, function)

(Signature)

**APPENDIX 8**

**EXAMPLES OF TABLE A AND TABLE B MATERIALS OF APPENDIX 1  
WITH CAS NUMBERS**

\*This list is developed with reference to Joint Industry Guide No.101.

\* This list is not exhaustive; it represents examples of chemicals with known CAS numbers and may require periodical updating.

Table	Material Category	Substances	CAS Numbers
Table A (materials listed in appendix 1 of the Convention)	Asbestos	Asbestos	1332-21-4
		Actinolite	77536-66-4
		Amosite (Grunerite)	12172-73-5
		Anthophyllite	77536-67-5
		Chrysotile	12001-29-5
		Crocidolite	12001-28-4
		Tremolite	77536-68-6
	Polychlorinated biphenyls (PCBs)	Polychlorinated biphenyls	1336-36-3
		Aroclor	12767-79-2
		Chlorodiphenyl (Aroclor 1260)	11096-82-5
		Kanechlor 500	27323-18-8
		Aroclor 1254	11097-69-1
	Ozone depleting substances/ isomers (they may contain isomers that are not listed here)	Trichlorofluoromethane (CFC11)	75-69-4
		Dichlorodifluoromethane (CFC12)	75-71-8
		Chlorotrifluoromethane (CFC 13)	75-72-9
		Pentachlorofluoroethane (CFC 111)	354-56-3
		Tetrachlorodifluoroethane (CFC 112)	76-12-0
		Trichlorotrifluoroethane (CFC 113)	354-58-5
		1,1,2 Trichloro-1,2,2 trifluoroethane	76-13-1
		Dichlorotetrafluoroethane (CFC 114)	76-14-2
		Monochloropentafluoroethane (CFC 115)	76-15-3
		Heptachlorofluoropropane (CFC 211)	422-78-6
			135401-87-5
		Hexachlorodifluoropropane (CFC 212)	3182-26-1
			2354-06-5
		Pentachlorotrifluoropropane (CFC 213)	134237-31-3
		Tetrachlorotetrafluoropropane (CFC 214)	29255-31-0
		1,1,1,3-Tetrachlorotetrafluoropropane	2268-46-4
		Trichloropentafluoropropane (CFC 215)	1599-41-3
		1,1,1-Trichloropentafluoropropane	4259-43-2
		1,2,3-Trichloropentafluoropropane	76-17-5
		Dichlorohexafluoropropane (CFC 216)	661-97-2
		Monochloroheptafluoropropane (CFC 217)	422-86-6
		Bromochlorodifluoromethane (Halon 1211)	353-59-3
		Bromotrifluoromethane (Halon 1301)	75-63-8
		Dibromotetrafluoroethane (Halon 2402)	124-73-2
		Carbon tetrachloride (Tetrachloromethane)	56-23-5
1,1,1, - Trichloroethane (methyl chloroform) and its isomers except 1,1,2-trichloroethane		71-55-6	
Bromomethane (Methyl bromide)		74-83-9	
Bromodifluoromethane and isomers (HBFC's)		1511-62-2	
Dichlorofluoromethane (HCFC 21)		75-43-4	
Chlorodifluoromethane (HCFC 22)	75-45-6		
Chlorofluoromethane (HCFC 31)	593-70-4		
Tetrachlorofluoroethane (HCFC 121)	134237-32-4		
1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a)	354-11-0		
1,1,2,2-tetrachloro-1-fluoroethane	354-14-3		
Trichlorodifluoroethane (HCFC 122)	41834-16-6		
1,2,2-trichloro-1,1-difluoroethane	354-21-2		

\*This list is developed with reference to Joint Industry Guide No.101.

\* This list is not exhaustive; it represents examples of chemicals with known CAS numbers and may require periodical updating.

Table	Material Category	Substances	CAS Numbers
		Dichlorotrifluoroethane(HCFC 123)	34077-87-7
		Dichloro-1,1,2-trifluoroethane	90454-18-5
		2,2-dichloro-1,1,1-trifluoroethane	306-83-2
		1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)	354-23-4
		1,1-dichloro-1,2,2-trifluoroethane (HCFC-123b)	812-04-4
		2,2-dichloro-1,1,2-trifluoroethane (HCFC-123b)	812-04-4
		Chlorotetrafluoroethane (HCFC 124)	63938-10-3
		2-chloro-1,1,1,2-tetrafluoroethane	2837-89-0
		1-chloro-1,1,2,2-tetrafluoroethane (HCFC 124a)	354-25-6
		Trichlorofluoroethane (HCFC 131)	27154-33-2; (134237-34-6)
		1-Fluoro-1,2,2-trichloroethane	359-28-4
		1,1,1-trichloro-2-fluoroethane (HCFC131b)	811-95-0
		Dichlorodifluoroethane (HCFC 132)	25915-78-0
		1,2-dichloro-1,1-difluoroethane (HCFC 132b)	1649-08-7
		1,1-dichloro-1,2-difluoroethane (HFCF 132c)	1842-05-3
		1,1-dichloro-2,2-difluoroethane	471-43-2
		1,2-dichloro-1,2-difluoroethane	431-06-1
		Chlorotrifluoroethane (HCFC 133)	1330-45-6
		1-chloro-1,2,2-trifluoroethane	1330-45-6
		2-chloro-1,1,1-trifluoroethane (HCFC-133a)	75-88-7
		Dichlorofluoroethane(HCFC 141)	1717-00-6; (25167-88-8)
		1,1-dichloro-1-fluoroethane (HCFC-141b)	1717-00-6
		1,2-dichloro-1-fluoroethane	430-57-9
		Chlorodifluoroethane (HCFC 142)	25497-29-4
		1-chloro-1,1-difluoroethane (HCFC142b)	75-68-3
		1-chloro-1,2-difluoroethane (HCFC142a)	25497-29-4
		Hexachlorofluoropropane (HCFC 221)	134237-35-7
		Pentachlorodifluoropropane (HCFC 222)	134237-36-8
		Tetrachlorotrifluoropropane (HCFC 223)	134237-37-9
		Trichlorotetrafluoropropane (HCFC 224)	134237-38-0
		Dichloropentafluoropropane, (Ethyne, fluoro-) (HCFC 225)	127564-92-5; (2713-09-9)
		2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC 225aa)	128903-21-9
		2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC 225ba)	422-48-0
		1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225bb)	422-44-6
		3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca)	422-56-0
		1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb)	507-55-1
		1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC 225cc)	13474-88-9
		1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC 225da)	431-86-7
		1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225ea)	136013-79-1
		1,1-Dichloro-1,2,3,3,3-pentafluoropropane(HCFC 225eb)	111512-56-2
		Chlorohexafluoropropane (HCFC 226)	134308-72-8
		Pentachlorofluoropropane (HCFC 231)	134190-48-0
		Tetrachlorodifluoropropane (HCFC 232)	134237-39-1
		Trichlorotrifluoropropane (HCFC 233)	134237-40-4
		1,1,1-Trichloro-3,3,3-trifluoropropane	7125-83-9
		Dichlorotetrafluoropropane (HCFC 234)	127564-83-4
		Chloropentafluoropropane (HCFC 235)	134237-41-5
		1-Chloro-1,1,3,3,3-pentafluoropropane	460-92-4
		Tetrachlorofluoropropane (HCFC 241)	134190-49-1
		Trichlorodifluoropropane (HCFC 242)	134237-42-6
		Dichlorotrifluoropropane (HCFC 243)	134237-43-7
		1,1-dichloro-1,2,2-trifluoropropane	7125-99-7
		2,3-dichloro-1,1,1-trifluoropropane	338-75-0
		3,3-Dichloro-1,1,1-trifluoropropane	460-69-5
		Chlorotetrafluoropropane (HCFC 244)	134190-50-4
		3-chloro-1,1,2,2-tetrafluoropropane	679-85-6



\* This list is developed with reference to Joint Industry Guide No.101.  
This list is not exhaustive; it represents examples of chemicals with known CAS numbers and may require periodical updating.

Table	Material Category	Substances	CAS Numbers	
Table B (Materials listed in appendix 2 of the Convention)		Trichlorofluoropropane (HCFC 251)	134190-51-5	
		1,1,3-trichloro-1-fluoropropane	818-99-5	
		Dichlorodifluoropropane (HCFC 252)	134190-52-6	
		Chlorotrifluoropropane (HCFC 253)	134237-44-8	
		3-chloro-1,1,1-trifluoropropane (HCFC 253fb)	460-35-5	
		Dichlorofluoropropane (HCFC 261)	134237-45-9	
		1,1-dichloro-1-fluoropropane	7799-56-6	
		Chlorodifluoropropane (HCFC 262)	134190-53-7	
		2-chloro-1,3-difluoropropane	102738-79-4	
		Chlorofluoropropane (HCFC 271)	134190-54-8	
		2-chloro-2-fluoropropane	420-44-0	
		Organotin compounds (tributyl tin, triphenyl tin, tributyl tin oxide)	Bis(tri-n-butyltin) oxide	56-35-9
			Triphenyltin N,N'-dimethyldithiocarbamate	1803-12-9
			Triphenyltin fluoride	379-52-2
	Triphenyltin acetate		900-95-8	
	Triphenyltin chloride		639-58-7	
	Triphenyltin hydroxide		76-87-9	
	Triphenyltin fatty acid salts (C=9-11)		47672-31-1	
	Triphenyltin chloroacetate		7094-94-2	
	Tributyltin methacrylate		2155-70-6	
	Bis(tributyltin) fumarate		6454-35-9	
	Tributyltin fluoride		1983-10-4	
	Bis(tributyltin) 2,3-dibromosuccinate		31732-71-5	
	Tributyltin acetate		56-36-0	
	Tributyltin laurate		3090-36-6	
	Bis(tributyltin) phthalate		4782-29-0	
	Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate(alkyl; C=8)		-	
	Tributyltin sulfamate		6517-25-5	
	Bis(tributyltin) maleate		14275-57-1	
	Tributyltin chloride		1461-22-9	
	Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)	-		
	Mixture of tributyltin 1,2,3,4,4a, 4b, 5,6,10,10adecahydro-7-isopropyl-1, 4a-dimethyl-1-phenanthlenecarboxylate and its analogs (Tributyltin rosin salt)	-		
	Other tributyl tins & triphenyl tins	-		
	Cadmium/ cadmium compounds	Cadmium	7440-43-9	
		Cadmium oxide	1306-19-0	
		Cadmium sulfide	1306-23-6	
		Cadmium chloride	10108-64-2	
		Cadmium sulfate	10124-36-4	
		Other cadmium compounds	-	
	Chromium VI compounds	Chromium (VI) oxide	1333-82-0	
		Barium chromate	10294-40-3	
		Calcium chromate	13765-19-0	
		Chromium trioxide	1333-82-0	
		Lead (II) chromate	7758-97-6	
		Sodium chromate	7775-11-3	
		Sodium dichromate	10588-01-9	
		Strontium chromate	7789-06-2	
		Potassium dichromate	7778-50-9	
		Potassium chromate	7789-00-6	
		Zinc chromate	13530-65-9	
		Other hexavalent chromium compounds	-	

\*This list is developed with reference to Joint Industry Guide No.101.

\* This list is not exhaustive; it represents examples of chemicals with known CAS numbers and may require periodical updating.

Table	Material Category	Substances	CAS Numbers
	Lead/lead compounds	Lead	7439-92-1
		Lead (II) sulfate	7446-14-2
		Lead (II) carbonate	598-63-0
		Lead hydrocarbonate	1319-46-6
		Lead acetate	301-04-2
		Lead (II) acetate, trihydrate	6080-56-4
		Lead phosphate	7446-27-7
		Lead selenide	12069-00-0
		Lead (IV) oxide	1309-60-0
		Lead (II,IV) oxide	1314-41-6
		Lead (II) sulfide	1314-87-0
		Lead (II) oxide	1317-36-8
		Lead (II) carbonate basic	1319-46-6
		Lead hydroxidcarbonate	1344-36-1
		Lead (II) phosphate	7446-27-7
		Lead (II) chromate	7758-97-6
		Lead (II) titanate	12060-00-3
		Lead sulfate, sulphuric acid, lead salt	15739-80-7
		Lead sulphate, tribasic	12202-17-4
		Lead stearate	1072-35-1
Other lead compounds	-		
	Mercury/mercury compounds	Mercury	7439-97-6
		Mercuric chloride	33631-63-9
		Mercury (II) chloride	7487-94-7
		Mercuric sulfate	7783-35-9
		Mercuric nitrate	10045-94-0
		Mercuric (II) oxide	21908-53-2
		Mercuric sulfide	1344-48-5
		Other mercury compounds	-
	Polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs)	Bromobiphenyl and its ethers	2052-07-5 (2-Bromobiphenyl)
			2113-57-7 (3-Bromobiphenyl)
			92-66-0 (4-Bromobiphenyl)
			101-55-3 (ether)
			13654-09-6
		Decabromobiphenyl and its ethers	1163-19-5 (ether)
			92-86-4
		Dibromobiphenyl and its ethers	2050-47-7 (ether)
			68928-80-3
		Hexabromobiphenyl and its ethers	59080-40-9
			36355-01-8 (hexabromo-1,1'-biphenyl)
			67774-32-7 (Firemaster FF-1)
			36483-60-0 (ether)
		Nonabromobiphenylether	63936-56-1
		Octabromobiphenyl and its ethers	61288-13-9
32536-52-0 (ether)			
Pentabromobidphenyl ether (note: commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.	32534-81-9 (CAS number used for commercial grades of PeBDPO)		
Polybrominated biphenyls	59536-65-1		
Tetrabromobiphenyl and its ethers	40088-45-7		
	40088-47-9 (ether)		
Tribromobiphenyl ether	49690-94-0		
Polychlorinated naphthalenes	Polychlorinated naphthalenes	70776-03-3	
	Other polychlorinated naphthalenes	-	

\*This list is developed with reference to Joint Industry Guide No.101.

\* This list is not exhaustive; it represents examples of chemicals with known CAS numbers and may require periodical updating.

Table	Material Category	Substances	CAS Numbers
	Radioactive substances	Uranium	-
		Plutonium	-
		Radon	-
		Americium	-
		Thorium	-
		Cesium	7440-46-2
		Strontium	7440-24-6
	Other radioactive substances	-	
	Certain shortchain chlorinated paraffins (with carbon length of 10-13 atoms)	Chlorinated paraffins (C10-13)	85535-84-8
		Other short chain chlorinated paraffins	-

## APPENDIX 9

### SPECIFIC TEST METHODS

#### 1 Asbestos

**Types to test for:** as per resolution MEPC.179(59); Actinolite CAS 77536-66-4 Amosite (Grunerite) CAS 12172-73-5 Anthophyllite CAS 77536-67-5 Chrysotile CAS 12001-29-5 Crocidolite CAS 12001-28-4 Asbestos Tremolite CAS 77536-68-6.

**Specific testing techniques:** Polarized Light Microscopy (PLM), electron microscope techniques and/or X-Ray Diffraction (XRD) as applicable.

**Specific reporting information:** The presence/no presence of asbestos, indicate the concentration range, and state the type when necessary.

Notes:

- .1 The suggested three kinds of testing techniques are most commonly used methods when analysing asbestos and each of them has its limitation. Laboratories should choose the most suitable methods to determine, and in most cases, two or more techniques should be utilized together.
- .2 The quantification of asbestos is difficult at this stage, although the XRD technique is applicable. Only a few laboratories conduct the quantification rather than the qualification, especially when a precise number is required. Considering the demand from the operators and ship recycling parties, the precise concentration is not strictly required. Thereby, the concentration range is recommended to report, and the recommended range division according to standard VDI 3866 is as follows:
  - Asbestos not detected
  - Traces of asbestos detected
  - Asbestos content approx. 1% to 15% by mass
  - Asbestos content approx. 15% to 40% by mass
  - Asbestos content greater than 40% by mass

Results that specified more precisely must be provided with a reasoned statement on the uncertainty.

- .3 As to the asbestos types, to distinguish all six different types is time consuming and in some cases not feasible by current techniques; while on the practical side, the treatment of different types of asbestos is the same. Therefore, it is suggested to report the type when necessary.

#### 2 Polychlorinated biphenyls (PCBs)

Note: there are 209 different congeners (forms) of PCB of it is impracticable to test for all. Various organizations have developed lists of PCBs to test for as indicators. In this instance two alternative approaches are recommended. Method 1 identifies the seven congeners used by the International Council for the Exploration of the Sea (ICES). Method 2 identifies 19 congeners and 7 types of aroclor (PCB mixtures commonly found in solid shipboard materials containing PCBs). Laboratories should be familiar with the requirements and consequences for each of these lists.

**Types to test for:** Method 1: ICES7 congeners (28, 52, 101, 118, 138, 153, 180). Method 2: 19 congeners and 7 types of aroclor, using the US EPA 8082a test.

**Specific testing technique:** GC-MS (congener specific) or GC-ECD or GC-ELCD for applicable mixtures such as aroclors. Note: standard samples must be used for each type.

**Sample Preparation:** It is important to properly prepare PCB samples prior to testing. For solid materials (cables, rubber, paint, etc.), it is especially critical to select the proper extraction procedure in order to release PCBs since they are chemically bound within the product.

**Specific reporting information:** PCB congener, ppm per congener in sample, and for Method 2, ppm per aroclor in sample should also be reported.

Notes:

- 1 Certain field or indicator tests are suitable for detecting PCBs in liquids or surfaces. However, there are currently no such tests that can accurately identify PCBs in solid shipboard materials. It is also noted that many of these tests rely on the identification of free chlorine ions and are thus highly susceptible to chlorine contamination and false readings in a marine environment where all surfaces are highly contaminated with chlorine ions from the sea water and atmosphere.
- 2 Several congeners are tested for as "indicator" congeners. They are used because their presence often indicates the likelihood of other congeners in greater quantities (many PCBs are mixes, many mixes use a limited number of PCBs in small quantities, therefore the presence of these small quantities indicates the potential for a mix containing far higher quantities of other PCBs).
- 3 Many reports refer to "total PCB", which is often a scaled figure to represent likely total PCBs based on the sample and the common ratios of PCB mixes. Where this is done the exact scaling technique must be stated, and is for information only and does not form part of the specific technique.

### 3 Ozone Depleting Substances

**Types to test for:** as per appendix 8 of these guidelines all the listed CFCs, Halons, HCFCs and other listed substance as required by Montreal Protocol.

**Specific testing technique:** Gas Chromatography-Mass Spectrometry (GC-MS), coupled Electron Capture Detectors (GC-ECD) and Electrolytic Conductivity Detectors (GC-ELCD).

**Specific reporting information:** Type and concentration of ODS.

### 4 Anti-fouling systems containing organotin compounds as a biocide

**Types to test for:** Anti-fouling compounds and systems regulated under Annex I to the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001 (AFS Convention), including: Tributyl tins (TBT), Triphenyl tins (TPT) and Tributyl tin oxide (TBTO).

**Specific testing technique:** As per resolution MEPC.104(49) (Guidelines for Brief Sampling of Anti-Fouling Systems on Ships), adopted 18 July 2003, using ICPOES, ICP, AAS, XRF, GC-MS as applicable.

**Specific reporting information:** Type and concentration of organotin compound.

Note: For "field" or "indicative" testing it may be acceptable to simply identify presence of tin, due to the expected good documentation on anti fouling systems.

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## ANNEX 4

### INTERVENTIONS BY THE DELEGATION OF NORWAY ON FUEL OIL QUALITY

#### Introduction of document MEPC 62/4/4

The Committee may recall that at its last session, Norway and INTERTANKO submitted a document MEPC 61/4/7 suggesting an urgent need for a stricter monitoring and enforcement of certain provisions of regulations 14 and 18 of MARPOL Annex VI. In brief, it called for a stricter control on bunkers delivered to ships. The Committee forwarded the document to BLG 15 for further consideration. In addition, Norway and INTERTANKO submitted at BLG 15, an additional document (BLG 15/11/4) with more concrete suggestions how we believe stricter monitoring can be achieved. As a result of extensive discussions, BLG 15 required that more information and data be supplied to enable appropriate consideration (paragraph 11.32 of document BLG 15/19).

In document MEPC 62/4/4, Norway and INTERTANKO submitted data and the consequences on ships of problematic bunker supply for the recent years. This data was collected from two bunker testing laboratories and probably represents the status for roughly 50% of all bunker deliveries that are tested by shipowners worldwide. As an overview from one of the laboratories, and based upon the analysis of more than 100,000 bunker samples or bunkering events, the receiving vessels have reported that on 1,468 occasions they have had machinery problems as a result of using the fuels as supplied. When extrapolated to the total, this would represent a figure of approximately 1.4% of all bunkering worldwide but many experts and many ship operators say these figures are only the tip of the iceberg as many incidents remain unreported or not further investigated.

Annexes 1 and 2 to this document supply examples of a selection of incidents related to poor quality bunkers that exposed ships and crew to unsafe situations. I wish to invite the Committee to note the significant number of cases of chemical contaminants in bunkers delivered to ships and the significant number of damages caused to ships' installations by bunkers which are definitely off the specifications in ISO 8217:2005.

The data presented provides information on the type of fuel, be it regular HFO or low sulphur content HFO or even MDO/MGO. The data also provides information on the flags of ships involved and the ports from where these contaminated and poor quality bunkers have been delivered.

Mr. Chairman, this document presents real facts as reported by ships where safety was put in jeopardy by the bunkers delivered to them. We would hope that the flags and the port authorities mentioned in these reports would not ignore these facts and would have an interest to safeguard the safety of ships under their flag and the safety of the ships calling at their ports and along their countries' coastlines.

Mr. Chairman, these incidents and the risks to which ships are exposed due to poor quality bunkers delivered to them have prompted Norway and INTERTANKO to suggest actions aimed at an improved enforcement of the current MARPOL Annex VI regulations, particularly 18.1, 18.9.4 and 18.9.6.

We will therefore invite the Committee to consider this additional data when discussing the report from BLG 15 (BLG 15/19) regarding the need of proper enforcement of the current MARPOL Annex VI requirements on fuel oil quality and the need for further improvement of the IMO regulatory regime on fuel oil quality, and take appropriate action.

### **Introduction of document MEPC 62/4/11**

I have been sailing as an engineer and worked as technical superintendent for several years, and can tell you from my experience that fuel is vital for the safe operation of a ship. I believe that other people with experience as engine staff can say the same. This experience and the number of stories we, the engine staff, can tell on fuels and operation of engines is one of the reasons why I firmly can say: It is time for the IMO to act on the issue of fuel oil quality.

MEPC 57 agreed to request ISO to make recommendations regarding fuel oil characteristics and parameters addressing air quality, ship safety, engine performance and crew health, taking into account the listing in annex 1 to document MEPC 59/4/3 (ISO).

Appendix V of MARPOL Annex VI requires the Bunker Delivery Note to contain only two appropriate parameters, namely the density of the bunker and its sulphur content as well as a general declaration by the supplier that the fuel is in conformity with the applicable paragraphs of regulations 14 and 18 of MARPOL Annex VI.

SOLAS regulation II-2/4.2.1.1 requires that the fuel used on board shall have a flashpoint of not less than 60°C. This parameter is not included in the BDN requirements in Appendix V of MARPOL Annex VI

As a follow-up of the response from ISO in document MEPC 59/4/3 as well as the report from BLG 15, (BLG 15/19), Norway believe that the Committee should initiate a process to address key parameters in an IMO context. We have in our document to the 59th session of the Committee proposed which additional fuel oil parameters should be addressed by the IMO because of their relevance to seafarers' health, safety of the ship and air emissions that have an impact on the safety of the ship and the health of its crew. In light of the incidents caused by low fuel oil quality it is now time for the Committee to initiate a process aiming at appropriate action on this important issue.

### **Introduction of document MEPC 62/4/12**

At BLG 10, Norway addressed, in paragraphs 61 to 64 of document BLG 10/14/2, the need for unified guidelines for sampling of fuel oil from fuel oil tanks during Port State Control. This issue Sir, is still remaining and in order to facilitate uniform enforcement during port state control, we propose that resolution MEPC.182(59), the 2009 Guidelines for the sampling of fuel oil for determination of compliance with the revised MARPOL Annex VI, is amended to include guidelines for representative sampling of the fuel oil in use from fuel oil tanks as set forth in our document BLG 10/14/2 and now reiterated in document MEPC 62/4/12.

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## ANNEX 5

### DRAFT AMENDMENTS TO THE NO<sub>x</sub> TECHNICAL CODE 2008

1 Existing paragraph 2.2.4 is replaced as follows:

"2.2.4 *Engines not pre-certified on a test bed*

- .1 There are engines which, due to their size, construction and delivery schedule, cannot be pre-certified on a test bed. In such cases, the engine manufacturer, shipowner or shipbuilder shall make application to the Administration requesting an on board test (see 2.1.2.2). The applicant must demonstrate to the Administration that the on board test fully meets all of the requirements of a test-bed procedure as specified in chapter 5 of this Code. In no case shall an allowance be granted for possible deviations of measurements if an initial survey is carried out on board a ship without any valid pre-certification test. For engines undergoing an on board certification test, in order to be issued with an EIAPP Certificate, the same procedures apply as if the engine had been pre-certified on a test bed, subject to the limitations given in paragraph 2.2.4.2.
- .2 This pre-certification survey procedure may be accepted for an Individual Engine or for an Engine Group represented by the Parent Engine only, but it shall not be accepted for an Engine Family certification."

2 Paragraph 2.2.5.1 is amended as follows:

- "1 Where a NO<sub>x</sub> reducing device is to be included within the EIAPP certification, it must be recognized as a component of the engine, and its presence shall be recorded in the engine's Technical File. The engine shall be tested with the NO<sub>x</sub>-reducing device fitted unless, due to technical and practical reasons, the combined testing is not appropriate and the procedures specified in paragraph 2.2.4.1 cannot be applied, subject to approval by the Administration. In the latter case the applicable test procedure shall be performed and the combined engine/NO<sub>x</sub>-reducing device shall be approved and pre-certified by the Administration taking into account guidelines developed by the Organization\*. However, this pre-certification is subject to the limitations given in paragraph 2.2.4.2."

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\* Refer to the 2011 Guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems, adopted by resolution MEPC.198(62).



**ANNEX 6**

**RESOLUTION MEPC.198(62)**

**Adopted on 15 July 2011**

**2011 GUIDELINES ADDRESSING ADDITIONAL ASPECTS TO THE NO<sub>x</sub> TECHNICAL CODE 2008 WITH REGARD TO PARTICULAR REQUIREMENTS RELATED TO MARINE DIESEL ENGINES FITTED WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEMS**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that, at its fifty-eighth session, the Committee adopted, by resolution MEPC.176(58), a revised MARPOL Annex VI (hereinafter referred to as "MARPOL Annex VI") and, by resolution MEPC.177(58), a revised Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter referred to as "the NO<sub>x</sub> Technical Code 2008"),

NOTING regulation 13 of MARPOL Annex VI which makes the NO<sub>x</sub> Technical Code 2008 mandatory under that Annex,

NOTING ALSO that the use of NO<sub>x</sub>-reducing devices is envisaged in the NO<sub>x</sub> Technical Code 2008 and that selective catalytic reduction systems (hereinafter referred to as "SCR systems") are such NO<sub>x</sub>-reducing devices for compliance with the Tier III NO<sub>x</sub> limit,

HAVING CONSIDERED, at its sixty-second session, the guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with SCR systems, developed by the Sub-Committee on Bulk Liquids and Gases at its fifteenth session,

1. ADOPTS the 2011 Guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with Selective Catalytic Reduction (SCR) Systems, as set out at annex to the present resolution;
2. INVITES Administrations to take the annexed Guidelines into account when certifying engines fitted with SCR systems;
3. REQUESTS Parties to MARPOL Annex VI and other Member Governments to bring the annexed Guidelines related to the NO<sub>x</sub> Technical Code to the attention of shipowners, ship operators, shipbuilders, marine diesel engine manufacturers, and any other interested groups; and
4. AGREES to keep these Guidelines under review in light of the experience gained.

ANNEX

**2011 GUIDELINES ADDRESSING ADDITIONAL ASPECTS TO THE NO<sub>x</sub> TECHNICAL  
CODE 2008 WITH REGARD TO PARTICULAR REQUIREMENTS RELATED TO MARINE  
DIESEL ENGINES FITTED WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEMS**

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## **1 INTRODUCTION**

1.1 The use of NO<sub>x</sub>-reducing devices is envisaged in the NO<sub>x</sub> Technical Code 2008 (NTC 2008) as given in section 2.2.5 and a Selective Catalytic Reduction (SCR) system is one of such devices.

1.2 NTC 2008 contains two ways for pre-certification of engine systems fitted with NO<sub>x</sub>-reducing devices:

- .1 engine fitted with SCR: Approval in accordance with paragraph 2.2.5.1 of the NTC 2008. Test according to chapter 5 of the NTC 2008; and
- .2 the simplified measurement method in accordance with section 6.3 of the NTC 2008 as regulated in paragraph 2.2.5.2 (Primary failure case) of the NTC 2008.

1.3 According to paragraph 2.2.5.1 of the NTC 2008 the engine system fitted with SCR should be tested on a test bed (Scheme A). Where that is not appropriate, given reasons as outlined under paragraph 3.1.1 of these guidelines; the provisions of Scheme B as set out in these guidelines should be applied.

1.4 Administrations are invited to take these guidelines into account when certifying engines fitted with SCR.

## **2 GENERAL**

### **2.1 Purpose**

2.1.1 The purpose of these guidelines is to provide guidance in addition to the requirements of the NTC 2008 for design, testing, surveys and certification of marine diesel engines fitted with an SCR system to ensure its compliance with the requirements of regulation 13 of MARPOL Annex VI.

### **2.2 Application**

2.2.1 These guidelines apply to marine diesel engines fitted with SCR for compliance with regulation 13 of MARPOL Annex VI.

### **2.3 Definitions**

2.3.1 Unless provided otherwise, the terms in these guidelines have the same meaning as the terms defined in regulation 2 of MARPOL Annex VI and in section 1.3 of the NTC 2008.

2.3.2 "Engine system fitted with SCR" means a system consisting of a marine diesel engine, an SCR chamber and a reductant injection system. When a control device on NO<sub>x</sub>-reducing performance is provided, it is also regarded as a part of the system.

2.3.3 "Catalyst block" means a block of certain dimension through which exhaust gas passes and which contains catalyst composition on its inside surface to reduce NO<sub>x</sub> from exhaust gas.

2.3.4 "SCR chamber" means an integrated unit, which contains the catalyst block(s), and into which flows exhaust gas and reductant.

2.3.5 "Reductant injection system" means a system, which consists of the pump(s) to supply reductant to the nozzle(s), the nozzle(s) spraying reductant into the exhaust gas stream and control device(s) of the spray.

2.3.6 "AV (area velocity) value" means a value of the exhaust gas flow rate passing through the catalyst blocks ( $\text{m}^3/\text{h}$ ) per total active surface area of the catalyst blocks in the SCR chamber ( $\text{m}^2$ ). Therefore, unit of AV value is ( $\text{m}/\text{h}$ ). The exhaust gas flow volume is the volume defined at  $0^\circ\text{C}$  and  $101.3\text{ kPa}$ .

2.3.7 "SV (space velocity) value" means a value of the exhaust gas flow rate passing through the catalyst block(s) ( $\text{m}^3/\text{h}$ ) per total volume of the catalyst block(s) in the SCR chamber ( $\text{m}^3$ ). Therefore, unit of SV value is ( $1/\text{h}$ ). The exhaust gas flow volume is the volume defined at  $0^\circ\text{C}$  and  $101.3\text{ kPa}$ .

2.3.8 "Total volume of the catalyst block" means the volume ( $\text{m}^3$ ) based on outer dimensions of the catalyst block.

2.3.9 "LV (linear velocity) value" means a value of the exhaust gas flow rate passing through the catalyst blocks ( $\text{m}^3/\text{h}$ ) per catalyst block's section ( $\text{m}^2$ ) in a normal direction of exhaust gas flow. Therefore, unit of LV value is ( $\text{m}/\text{h}$ ). The exhaust gas flow volume is the volume defined at  $0^\circ\text{C}$  and  $101.3\text{ kPa}$ .

2.3.10 "Block section" means the cross-sectional area ( $\text{m}^2$ ) of the catalyst block based on the outer dimensions.

2.3.11 "NO<sub>x</sub> reduction rate  $\eta$ " means a value deriving from the following formula. Unit of  $\eta$  is (%):

$$\eta = \frac{(c_{inlet} - c_{outlet})}{c_{inlet}} \cdot 100$$

Where:  $c_{inlet}$  is NO<sub>x</sub> concentration (ppm) as measured at the inlet of the SCR chamber;  
 $c_{outlet}$  is NO<sub>x</sub> concentration (ppm) as measured at the outlet of the SCR chamber.

### **3 PRE-CERTIFICATION PROCEDURE**

#### **3.1 General**

3.1.1 Engine systems fitted with SCR should be certified in accordance with chapter 2 of the NTC 2008. In cases where combined engine/SCR systems can neither be tested on a test bed due to their size, construction and other restrictions nor an on board test can be performed fully complying with the requirements of chapter 5 of the NTC 2008 the procedures provided by Scheme B of these guidelines should be applied.

3.1.2 The applicant for certification should be the entity responsible for the complete system "Engine system fitted with SCR", e.g., the engine manufacturer.

3.1.3 The applicant should supply all necessary documentation, including the Technical File for the complete system, a description of the required on board NO<sub>x</sub> verification procedure and, where applicable, the description of the confirmation test procedure.

### **3.2 Technical File and on board NO<sub>x</sub> verification procedures**

3.2.1 In addition to the information supplied in paragraph 3.1.3 of these guidelines and items in section 2.4 of the NTC 2008, engine systems fitted with SCR should include the following information in its Technical File:

- .1 reductant: component/type and concentration;
- .2 reductant injection system including critical dimensions and supply volume;
- .3 design features of SCR specific components in the exhaust duct from the engine exhaust manifold to the SCR chamber;
- .4 catalyst block specification and arrangement in the SCR chamber;
- .5 inlet parameters including allowable exhaust gas temperature (maximum and minimum) at the inlet of the SCR chamber;
- .6 cross-unit parameters: allowable pressure loss ( $\Delta p$ ) between inlet and outlet of SCR chamber and in the exhaust duct caused by SCR components;
- .7 aspects related to the fuel oil quality resulting in continued compliance of the engine with the applicable NO<sub>x</sub> emission limit;
- .8 factors related to the deterioration rate of SCR performance, e.g., exchange condition for SCR blocks and recommended exchange time of SCR blocks;
- .9 controlling arrangements and settings of the SCR, e.g., model, specification of control device;
- .10 measures to minimize reductant slip;
- .11 parameter check method as the verification procedure: with regard to the application of the parameter check method, requirements given in paragraph 2.3.6 of the NTC 2008 and guidance given in appendix VII, paragraph 2 of the NTC 2008 should be taken into account in assessing the adequacy of a proposed procedure with analysers meeting or exceeding the requirements of appendix III of the NTC 2008; and
- .12 any other parameter(s) specified by the manufacturer.

### **3.3 Measures to minimize reductant slip**

3.3.1 When SCR uses urea solution, ammonia solution or ammonia gas as reductant, measures to prevent reductant slip should be provided to avoid the supply of an excessive amount of reductant in the system. The reductant injection system should be designed to prevent emissions of any harmful substance from the system.

### **3.4 Pre-certification procedure**

3.4.1 Test and pre-certification of an engine system fitted with SCR should be conducted either by Scheme A (as given in section 5 of these guidelines), or by Scheme B (as given in sections 6 and 7 of these guidelines), as appropriate.

### **3.5 EIAPP certificate**

3.5.1 An Engine International Air Pollution Prevention (EIAPP) Certificate (see appendix I of the NTC 2008) should be issued by the Administration after approval of the Technical File.

3.5.2 When an applicant chooses the Scheme B for pre-certification, the IAPP initial survey should not be completed until the on board initial confirmation test provides compliant results. The applicant remains the responsible entity until final acceptance of the system.

## **4 FAMILY AND GROUP CONCEPTS FOR ENGINE SYSTEMS FITTED WITH SCR**

4.1 Requirements in chapter 4 of the NTC 2008 apply equally to engine systems fitted with SCR.

## **5 TEST PROCEDURES FOR SCHEME A**

### **5.1 General**

5.1.1 A test for a combined system of an engine fitted with an SCR in Scheme A is to ensure compliance with the applicable NO<sub>x</sub> emission limits of MARPOL Annex VI, as required. The test bed measurement procedures of chapter 5 of the NTC 2008 should apply.

### **5.2 Calculation of gaseous emissions**

5.2.1 The calculation method in section 5.12 of the NTC 2008 is also applied to engine systems fitted with SCR. No allowance is made for the reductant solution injected into the exhaust gas stream in respect of its effect on exhaust gas mass flow rate calculation (appendix VI) or dry/wet correction factor (equation (11), paragraph 5.12.3.2.2 of the NTC 2008). The NO<sub>x</sub> correction factor for humidity and temperature (equations (16) or (17), paragraphs 5.12.4.5 and 5.12.4.6, respectively, of the NTC 2008) should not be applied.

5.2.2 For an engine system fitted with SCR, the following parameters should be measured and recorded in the engine test report in accordance with section 5.10 of the NTC 2008:

- .1 injection rate of reductant at each load point (kg/h);
- .2 exhaust gas temperature at the inlet and outlet of the SCR chamber (°C);
- .3 pressure loss (kPa): it is necessary to measure the pressure at inlet and at outlet of the SCR chamber and to calculate pressure loss  $\Delta p$ . If the manufacturer sets an allowable limit of  $\Delta p$ , it should be confirmed; and
- .4 other parameter(s) as specified by the Administration.

## **6 TEST PROCEDURES FOR SCHEME B**

### **6.1 General**

6.1.1 A test for an engine system fitted with SCR in Scheme B is to ensure that the system complies with the applicable NO<sub>x</sub> emission limits in MARPOL Annex VI, as required. The test procedures in Scheme B are as follows:

- .1 an engine is tested to obtain the NO<sub>x</sub> emission value (g/kWh) in accordance with paragraph 6.2.1 of these guidelines;



- .2 the SCR NO<sub>x</sub> reduction rate may be calculated by modelling tools, taking into account geometrical reference conditions, chemical NO<sub>x</sub> conversion models as well as other parameters to be considered;
- .3 an SCR chamber, not necessarily to full scale, is to be tested in accordance with section 6.3 of these guidelines in order to generate data for the calculation model as that used in paragraph 6.1.1.2 of these guidelines;
- .4 the NO<sub>x</sub> emission from the engine system fitted with SCR, which is calculated in accordance with section 6.4 of these guidelines using the NO<sub>x</sub> emission value from the engine and the NO<sub>x</sub> reduction rate of SCR chamber. At this point the Technical File will be completed and this NO<sub>x</sub> emission value will be entered into the supplement of the EIAPP certificate; and
- .5 the NO<sub>x</sub> emission performance of the engine combined with the SCR is verified by a confirmation test in accordance with the procedure in paragraph 7.5 of these guidelines.

## **6.2 Verification test procedures for an engine**

6.2.1 The purpose of the test of an engine is to establish the emission values for use in section 6.4 of these guidelines. These measurements should be in accordance with chapter 5 of the NTC 2008.

6.2.2 Paragraph 5.9.8.1 of the NTC 2008 requires engine conditions to be measured at each mode point, for an engine system. This equally applies in the case of an engine fitted with SCR. Additionally, exhaust gas temperature at the intended inlet of the SCR chamber should be determined and recorded in the test report as required by section 5.10 of the NTC 2008.

## **6.3 Test procedures for SCR chambers**

### **6.3.1 General**

6.3.1.1 The SCR chamber for validation testing may be either a full scale SCR chamber or a scaled version. A SCR chamber should demonstrate the reduction in NO<sub>x</sub> concentrations (ppm) expected in exhaust gas measured in section 6.2 of these guidelines. Therefore, NO<sub>x</sub> reduction rate of the SCR chamber should be determined for each individual mode point. Where undertaken on a scaled version of the SCR chamber the scaling process should be validated to the satisfaction of the Administration.

### **6.3.2 Test conditions at each mode point**

6.3.2.1 Exhaust gas, catalyst, reductant and an injection system should satisfy the following conditions at each mode point:

- .1 Exhaust gas flow  
Exhaust gas flow rate for the test should be scaled accordingly to account for the dimension of the catalyst model.
- .2 Exhaust gas component  
Exhaust gas for the test should either be diesel engine exhaust gas or simulated gas.

Where diesel exhaust gas is used it should correspond, in terms of concentrations, to the exhaust gas in section 6.2 of these guidelines, in terms of NO<sub>x</sub>, O<sub>2</sub>, CO<sub>2</sub>, H<sub>2</sub>O, and SO<sub>2</sub> (±5% of the required concentration for each emission species).

Where simulated gas is used it should correspond, in terms of concentrations, to the exhaust gas in section 6.2 of these guidelines, in terms of NO, NO<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, H<sub>2</sub>O, and SO<sub>2</sub> (±5% of the required concentration for each emission species) balance N<sub>2</sub>.

.3 Exhaust gas temperature

The temperature of exhaust gas used for the test should correspond to the temperatures obtained from testing in section 6.2 of these guidelines, ensuring that the SCR chamber is activated at every load point, other than as provided for by 3.1.4 of the NTC 2008, and that no ammonia bisulphate formation, or reductant destruction, takes place.

.4 Catalyst blocks and AV,SV value

The catalyst blocks used in the test should be representative of the catalyst blocks to be used in the SCR chamber in service. AV,SV or LV value should, in the case of full scale tests, be within a range of ±20% of the required value as obtained in testing from section 6.2 of these guidelines. In the case of scaled tests it should correspond to the above.

.5 Reductant

The reductant concentration should be representative of the reductant concentration in the exhaust gas during actual operation.

### 6.3.3 Stability for measurement

6.3.3.1 All measurements should be recorded after they have stabilized.

### 6.3.4 List of data to be derived from the model

6.3.4.1 Operating data which is to be given in the Technical File should be derived from the modelling process or otherwise justified.

6.3.4.2 Exhaust gas analysers should be in accordance with appendix III and appendix IV of the NTC 2008 or otherwise to the satisfaction of the Administration.

### 6.3.5 Test report for SCR chamber

6.3.5.1 Data recorded under paragraph 6.3.1.1 of these guidelines should be recorded in the test report as required by section 5.10 of the NTC 2008.

## 6.4 Calculation of the specific emission

6.4.1 The NO<sub>x</sub> emission value of the engine system fitted with SCR should be calculated as follows:

$$\text{gas}_x = \frac{\sum_{i=1}^{i=n} ((100 - \eta_i)/100) \cdot q_{m\text{gas}_i} \cdot W_{F_i}}{\sum_{i=1}^{i=n} (P_i \cdot W_{F_i})}$$

Where:  $\eta_i$  = NO<sub>x</sub> reduction rate (%) derived in accordance with section 6.3 of these guidelines;  
 $q_{\text{mgas}_i}$  = Mass flow of NO<sub>x</sub> gas measured in accordance with section 6.2 of these guidelines;  
 $W_{F_i}$  = Weighting factor;  
 $P_i$  = Measured power at individual mode points in accordance with section 6.2 of these guidelines.

The weighting factors and number of modes (n) used in above calculation shall be according to the provisions of section 3.2 of the NTC 2008.

6.4.2 The NO<sub>x</sub> emission value (g/kWh) calculated in accordance with paragraph 6.4.1 of these guidelines should be compared to the applicable emission limit. This emission value is entered into 1.9.6 of the Supplement to the EIAPP certificate (appendix I of the NTC 2008).

## **6.5 Test report to be submitted to the Administration**

6.5.1 The test report referenced under paragraphs 6.2.2 and 6.3.5.1 of these guidelines, together with the data from section 6.4 of these guidelines should be consolidated into the overall documentation to be submitted to the Administration.

## **7 ON BOARD CONFIRMATION TEST FOR SCHEME B**

7.1 After installation on board of an engine system fitted with SCR and before entry into service an initial confirmation test should be performed on board.

7.2 The engine system fitted with the SCR should be verified as corresponding to the description given in the Technical File.

7.3 The confirmation test should be undertaken as close as possible to 25%, 50% and 75% of rated power, independent of test cycle.

7.4 At each mode point of the confirmation test the operating values as given in the Technical File should be verified.

7.5 NO<sub>x</sub> emission concentrations should be measured at the inlet and outlet of the SCR chamber. The NO<sub>x</sub> reduction rate should be calculated. Both values should either be dry or wet. The value obtained for NO<sub>x</sub> reduction rate should be compared to the initial confirmation test required value at each mode point as given in the Technical File. Reduction efficiency values obtained at each of the test points should not be less than the corresponding values as given in the Technical File by more than 5%.

7.6 The NO<sub>x</sub> analyser should meet the requirements of chapter 5 of the NTC 2008.

7.7 When an engine system fitted with SCR is in a group defined in chapter 4 of these guidelines, the confirmation test should be conducted only for the parent engine system of the group.

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**ANNEX 7**

**RESOLUTION MEPC.199(62)**

**Adopted on 15 July 2011**

**2011 GUIDELINES FOR RECEPTION FACILITIES UNDER MARPOL ANNEX VI**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that, at its fifty-eighth session, the Committee adopted, by resolution MEPC.176(58), a revised MARPOL Annex VI (hereinafter referred to as "MARPOL Annex VI") which includes mandatory provisions that Ozone Depleting Substances and equipment containing such substances be delivered to appropriate reception facilities when removed from ships,

NOTING that regulation 17 of MARPOL Annex VI specifies two types of wastes for which Parties must ensure the provision of reception facilities for ships calling at their ports,

NOTING ALSO that adequate MARPOL Annex VI reception facilities shall meet the needs of ships calling at a port or terminal without causing undue delay,

HAVING CONSIDERED, at its sixty-second session, the 2011 Guidelines for reception facilities under MARPOL Annex VI, developed by the Sub-Committee on Bulk Liquids and Gases at its fifteenth session,

1. ADOPTS the 2011 Guidelines for reception facilities under MARPOL Annex VI, as set out at annex to the present resolution;
2. INVITES Administrations to take the annexed Guidelines into account when developing and enacting national laws which give force to and implement provisions set forth in regulation 17 of MARPOL Annex VI;
3. REQUESTS the Parties to MARPOL Annex VI and other Member Governments to bring the annexed Guidelines to the attention of port and terminal operators and ship repair and ship recycling facilities, and any other interested groups; and
4. AGREES to keep these Guidelines under review in light of the experience gained.

## ANNEX

### 2011 GUIDELINES FOR RECEPTION FACILITIES UNDER MARPOL ANNEX VI

#### 1 INTRODUCTION

1.1 The main objectives of these Guidelines are to:

- .1 assist Governments in developing and enacting domestic laws which give force to and implement provisions set forth in regulation 17, Reception Facilities, of MARPOL Annex VI;
- .2 assist port and terminal operators and ship repair ports, and ship recycling facilities in assessing the need for and providing adequate reception facilities for Ozone Depletion Substances (ODS) and equipment containing ODS; and
- .3 assist port and terminal operators in assessing the need for, and providing adequate reception facilities for exhaust gas cleaning residues.

1.2 Adequate MARPOL Annex VI reception facilities shall meet the needs of ships calling at a port or terminal without causing undue delay.

1.3 MARPOL Annex VI, regulation 17 specifies two types of wastes that Parties must ensure the provision of reception facilities for ships calling at their ports:

- .1 Ozone Depleting Substances are those defined in MARPOL Annex VI, regulation 2.16; and
- .2 Exhaust gas cleaning residues are ship-generated residues that may range from liquid to solid.

#### 2 DEFINITIONS

With reference to regulation 17 of MARPOL Annex VI:

2.1 *Remotely located port or terminal* means a port or terminal as informed to the Organization under regulation 17.2 of MARPOL Annex VI.

2.2 *Manage and process* means actions related to the collection, storage, transport, treatment and disposal of ODS and/or exhaust gas cleaning residues such that they are rendered in a safe and environmentally benign condition in accordance with best available practices.

2.3 *Appropriate action* means those actions taken by informed Parties to communicate to ships under their control that the advised ports cannot handle certain ODS and/or exhaust gas cleaning residues and those actions ships will need to take necessary to manage or process those substances in an alternative manner. Such alternatives could include arranging for collection before or after visiting the affected port, and in the latter case, ensuring adequate on board storage exists for those substances.

2.4 *EGCS residues* are a product of the water treatment process. The residue can be formed and removed from the water with different treatment techniques. Such residues contain sulphates, ash/soot, metals and hydrocarbons removed from the water.

2.5 ODS and equipment containing ODS are as defined in regulation 2.16 and equipment as referred to in regulation 12.4.

### **3 GENERAL REQUIREMENTS FOR MARPOL ANNEX VI RECEPTION FACILITIES**

#### **3.1 Treatment and disposal of ODS and EGCS residues**

Taking into consideration its own local and national environmental laws and regulations as well as applicable international regulations and treaties, a Party should adopt strategies for collection, storage, transport, treatment and disposal of ODS and EGCS residues. Strategies for managing MARPOL Annex VI wastes should be safe and environmentally benign and based on industry best practices and best available technologies, and taking into account the local infrastructure. Parties are highly encouraged to make regular updates to the availability of Annex VI reception facilities in the Global Integrated Shipping Information System (GISIS) at: <http://gisis.imo.org/Public/>.

#### **3.2 Composition of EGCS residues**

Residues may contain sulphates, ash/soot, metals and hydrocarbons removed from the wash water. Specifically it may contain sulphite salts ( $\text{CaSO}_x$ ) and may also include other metal sulphites ( $\text{NaSO}_x$  and  $\text{KSO}_x$ ) and metal oxides and including Vanadium (V), Nickel (Ni), Magnesium (Mg), Aluminium (Al), Iron (Fe), and Silicon (Si).

#### **3.3 Training/certification of personnel**

Taking into consideration its own local and national laws and regulations Parties should ensure that personnel who process ODS have been properly trained in all personal protective measures to ensure safe handling of such materials and prevent the release of ODS to the atmosphere. Administrations should develop a certification system whereby letters or certificates are issued to qualified shore side personnel attesting to proper training for handling ODS and equipment containing ODS and operating disposal equipment. Such equipment should comply with rigorous standards for operation and be certified and/or approved.

#### **3.4 Sufficient capacity for the throughput of trade and the likely volumes to be handled**

Parties should undertake to evaluate the types and capacities of ships using their ports and terminals to determine the quantities of ODS and EGCS residues likely to be generated. Parties should ensure that ports and terminals have the capacity to collect and store, if necessary, ODS and EGCS residues from any and all ships that use its ports terminals. If capacity from several ports or terminals, including remotely located ports or terminals, is to be pooled then a Party should ensure that the capacity of such a pooled resource is sufficient for all facilities using it.

#### **3.5 Provision of documentation for custody transfer from ship to reception facility**

The Organization published MEPC.1/Circ.671, A Guide to Good Practice for Port Reception Facility Providers and Users. This user friendly guidance includes Appendix 2, MEPC.1/Circ.644, Advance Notification Form (ANF); and MEPC.1/Circ.645 Waste Delivery Receipt (WDR). These standard forms may be used by ship masters and port reception facility operators to document the transfer of wastes by type and quantity from ships to shore side reception facilities. When providing advanced notification to a port or terminal that Annex VI reception facilities will be required, the ANF may be used. Where reception facility operators are required to provide to the ship a receipt for ODS and/or EGCS residues, the WDR may be used.

## **4 GENERAL REQUIREMENTS APPLICABLE WHEN MARPOL ANNEX VI RECEPTION FACILITIES ARE NOT AVAILABLE**

### 4.1 Where reception facilities are not provided

Parties must notify the Organization in the event that a port or terminal cannot provide ODS or EGCS residue reception facilities. In addition Parties must notify the Organization where such facilities are, alternatively, provided. Parties are highly encouraged to make regular updates to the availability of Annex VI reception facilities in the Global Integrated Shipping Information System (GISIS) at: <http://gisis.imo.org/Public/>. Parties that inform the Organization of ports that cannot accept ODS or EGCS residues are encouraged to provide an explanation as to the specific reasons that necessitate such notification.

### 4.2 Use of regional/bi-lateral agreements

The concept of regional arrangements is encouraged as a possible alternative for ensuring adequacy of reception facilities. Parties could enter into a regional or bi-lateral arrangement with other Parties in a region that would provide reception facilities to ships travelling in the region. It has been recognized by the Organization that waste management planning on a regional basis and the establishment of regional arrangements can provide an alternative solution for ensuring that ships do not have an incentive to discharge waste into the environment, including the atmosphere, and that ports and terminals within a region can meet the requirements of regulation 17 of MARPOL Annex VI.

### 4.3 Alternative facilities (required to be reported in accordance with regulation 17.2)

A Party shall report to the Organization when any alternative arrangement is made by a port or terminal to provide ODS or EGCS residue reception facilities. Additionally, a Party shall report to the Organization where such adequate reception facilities are provided.

### 4.4 Criteria for those alternative measures for reception facilities

Criteria for those alternative measures for reception facilities should take into consideration the capacities required to meet the needs of ships calling in their region and without causing undue delay.

### 4.5 Alternative reception facilities

Alternative reception facilities should have an environmentally acceptable method for processing/handling MARPOL Annex VI wastes as outlined in paragraph 5.1.

## **5 GENERAL REQUIREMENTS FOR SHIPS USING PORTS WHERE RECEPTION FACILITIES ARE NOT AVAILABLE**

### 5.1 Voyage planning and on board storage

Voyage planning should be part of any waste management planning strategy. Masters of ships should ensure that there is adequate on board capacity for storage of all ODS and EGCS residues that may be generated during the course of voyages which include visits to ports or terminals where reception facilities are not available.



## 5.2 Notifications (according to regulation 17.3)

The Guide to Good Practice for Port Reception Facility Providers and Users (MEPC.1/Circ.671) contains Appendix 1 Revised Consolidated Format for Reporting Alleged Inadequacy of Port Reception Facilities. This standard form may be used by ship masters to report MARPOL Annex VI reception facility inadequacy to the Organization and to the port State through their own flag State Administration.

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## **ANNEX 8**

### **STATEMENTS BY THE DELEGATIONS OF BRAZIL, INDIA, PERU AND POLAND ON MATTERS OF PRINCIPLE OR POLICY CONCERNING REDUCTION OF GHG EMISSIONS FROM SHIPS**

#### **Statement by the delegation of Brazil**

Brazil supports the establishment of a working group to discuss energy efficiency measures for ships. This is an important and sensitive issue that should be very carefully dealt with by this Committee.

Brazil would like to reiterate that there are several outstanding technical, economic, and technological uncertainties and technical issues still pending related to document MEPC 62/6/3. Many of those uncertainties and technical issues are raised in documents submitted under agenda item 5. Moreover, document MEPC 62/6/3 proposes the mandatory application of EEDI and SEEMP, and should thus be treated together with all other documents related to EEDI and SEEMP. It is the position of Brazil that EEDI and SEEMP should be treated in a package, by a single working group, with terms of reference to include the discussion of both documents under item 5 and documents under the provisional item 6.2.

Brazil believes it is premature to consider the proposed amendments on energy efficiency in a drafting group. Brazil is of the position that this amendment proposal and related documents should be referred to a working group before it can be considered by a drafting group.

In order to maximize our precious time during this week, Brazil would like to reiterate our proposal that a separate group is established to discuss air pollution, while another working group should be established to consider all issues related to GHG emissions reductions from ships and energy efficiency measures. The terms of reference for such a working group on energy efficiency measures for ships should include all documents submitted under agenda item 5, as well as document MEPC 62/6/3 and related documents that were provisionally included under item 6.2.

#### **Statement by the delegation of India**

We appreciate the importance given by the International Maritime Organization and the Secretary General to the issue of GHG which we see as a serious threat faced by the earth and humankind. At the same time, we also note that international shipping activity account for less than 3% of the overall GHG emissions.

To circulate the proposed amendments to MARPOL VI despite there being no consensus or approval by MEPC, defeats the very foundation of international relations and cooperation that binds the multilateral institutional practice and the culture of collectivism, as cornerstones of peace and progress. One of the key objectives of the IMO Committees is to ensure maximum possible participation of all Member States and organizations with observer status in its work and its subsidiary bodies.

Further, as per Article 16(2) (d), an adoption of the amendments by a majority of two thirds of the Parties to the Convention present and voting, excludes those who are not yet Parties to the Convention, though not necessarily averse to ratifying it, is rather improper, particularly leading to eliminating some Member States who have actively participated in relevant debates in previous sessions of MEPC. As we see only 65 States have ratified the MARPOL Annex VI, dealing with the Prevention of Air Pollution from Ships.

In order to ratify the Convention, each Party is required to ensure that they comply with the requirements of the Convention and as such, some take more than the others.

Concerns have been raised by the Parties in their submissions with respect to the EEDI formula. One of the documents clearly states that shipbuilders have proven their competitive edge in producing the most advanced and fuel efficient ships world-wide, and they are still concerned about the lack of maturity of the EEDI concept regarding complex type issues. Other document has raised the issue of specialized ships that are extremely efficient in their particular trades, could ultimately lead to an increase in emissions.

Further, EEDI concept has too many limitations and flaws which while trying to achieve reduction on CO<sub>2</sub> emission can actually lead to having nil or even negative impact which has been already been researched and projected. It is our firm opinion that such a serious and important issue is being dealt with in a very superficial manner without taking into any account the fact that over the last few decades ship designers have been toiling to have most efficient engines developed, and instead of further utilizing such experts advise and finding proper solutions a flawed proposal with a lot of pitfalls on technical front as well as without a proper study of the implications of this on reliability and safety of navigation is being brought to the table. We are very sure that IMO does not want to see Vessels with badly degraded manoeuvrability and poor heavy weather performance or higher number of Vessels to fulfil trade needs just to fulfil the requirements of EEDI.

We are yet to ascertain the implication of adopting EEDI, regardless of vessels type and size, on their sea going characteristics.

We feel IMO is losing sight of its actual objective of ensuring safe and secure shipping and in this instance unnecessarily treading onto an area of technicality which is best dealt with by experts in that field and by proposing EEDI exposing international shipping to a proposal which has the potential for extremely damaging consequences.

Mr. Chairman, by taking this opportunity, I would like to reiterate the India's position on this issue:

- .1 Technical and operational Measures: we support the initiative for energy efficiency measures as long as it is voluntary at this stage, and all parameters are worked out.
- .2 We do not support Market Based Measures, as the WTO compatibility of the MBM proposals needs to be examined in all their aspects before any further discussion on this issue.

India would reiterate that the specific proposal to include legislative measures as a part of MARPOL Convention in Annex VI is not the correct legal procedure. Details will be made available while introducing India's submission, document MEPC 62/6/9.

Further, we would like to emphasize that whatever measure is adopted by the Committee and by the organization should adhere to the principle of the UNFCCC and of the Kyoto Protocol. India will not accept any legally binding commitment at this stage.

During the just concluded Bonn Climate Change Talks, no consensus on international shipping and aviation bunker fuel could be reached. Mr. Chairman, as you may be aware; six options have been proposed during the Bonn talks, for the bunker fuels. This clearly shows that there is no consensus among the Parties. It will be prudent to await the outcome of COP 17 and allow MEPC 63 to discuss the entire issue.

In case, we reach no consensus on the Mandatory application of the technical measures by Friday, and the route of voting is to be adopted, Mr. Chairman, this will set a precedent, and the working of IMO which so far, has been through the consensus, may bring in unnecessary division between the Annex I and Non Annex I Parties.

#### **Statement by the delegation of Peru**

Peru is a country highly vulnerable to the harmful effects of climate change, and so the Peruvian Government is fully engaged in the multilateral efforts to achieve a binding, enterprising and effective agreement which corresponds to the United Nations Framework Convention on Climate Change and the Kyoto Protocol. Consistent with this position, Peru believes that global mitigation efforts should be undertaken mainly by the developed countries, while the developing countries adapt their societies and economies to climate change.

While Peru welcomes the incorporation of future new technical and operational measures to reduce CO<sub>2</sub> levels within the IMO regulatory framework, it considers that the procedure put forward by a group of countries to incorporate new mandatory measures through amendment of MARPOL Annex VI constitutes a hasty proposal which does not help to advance the collective efforts to reduce greenhouse gases in the maritime sector. It has widened the division in the Organization and ignores other features of the negotiation of a global and fair agreement that incorporates technology transfer and the creation of capacity.

Peru considers that the proposed legal procedure is not sound, leaves aside fundamental aspects of the negotiation of a global agreement, such as recognition of differing development levels and capacities, and, lastly, seeks to make EEDI approval subject to decision by a group of countries – those that accede to Annex VI. Let us recall that not all Member States agree that Annex VI is the appropriate tool, given that all of us who are party to the MARPOL Convention want to be part of the decision-making process. Consequently, the current proposal has accentuated divisions at IMO and does not appear to enjoy the necessary support, which will make it more difficult for new technical and operational measures to be implemented by developing countries.

#### **Statement by the delegation of Poland**

At the outset of discussion on this agenda item let us express and reiterate the commitment of Poland to further work, in cooperation with other Parties here at the IMO, towards a meaningful progress on technical, operational and Market-Based Measures for new and existing ships to reduce GHG emissions from international maritime transport. The external pressure and expectations of the international community on the IMO are clearly visible, and are obviously understandable. Much work has been already done, but IMO is expected now to produce a regulatory frame for the reduction of emission from shipping. It is apparent that the market based measures need some further discussion before being incorporated into IMO's regulatory framework; on the other hand - the agreement on the technical and operational ways of emission reduction, namely: the EEDI (Energy Efficiency Design Index) and SEEMP (Ship Energy Efficiency Management Plan), is within the reach of arm. In view of this delegation it would be most appropriate to focus the Committee's efforts on this issue and to finalize the work on EEDI, so that the respective amendments be adopted at this session. It will be a good message to the international community that IMO is really progressing, and delivering, its contribution to the world's efforts towards GHG reduction and climate change mitigation. Mr. Chairman, this statement only presents the general view of this delegation and we may have some specific comments to certain documents on this agenda item, once they are presented.

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**ANNEX 9**

**WORK PLAN AND SCHEDULE FOR FURTHER DEVELOPMENT OF TECHNICAL AND OPERATIONAL MEASURES FOR SHIPS**

**1 EEDI framework for ship types and sizes, and propulsion systems not covered by the current EEDI requirements**

MEPC session :		MEPC 62	MEPC 63	MEPC 64	MEPC 65	MEPC 66	MEPC 67	MEPC 68	MEPC 69
Date (for 2012 to 2016, the dates are tentative) :		July 2011	February 2012	October 2012	[July 2013]	[March 2014]	[October 2014]	[July 2015]	[March 2016]
Definition of ro-ro cargo ship and vehicle carrier		—————→			Finalization	Adoption			
Regulatory frameworks (reference lines and reduction factors) for: - passenger ships - ro-ro cargo ships - ro-ro passenger ships		—————→			Finalization	Adoption			
Consideration of EEDI calculation method for ships having diesel electric propulsion, turbine propulsion, hybrid propulsion and other propulsion systems or dual fuel systems		—————→			Finalization	Adoption			
Review process	Review of applicable requirements for small ship segments with linear reduction factors in regulation 21 (review process 1)	—————→			Finalization				
	Review of EEDI for larger size segment of oil tankers and bulk carriers	—————→			Finalization				
	Review of technological developments and adjust the time period and reduction factors set out in Phases 2 and 3 (review process 2)						—————→		

**2 Remaining EEDI and SEEMP related guidelines to be developed**

MEPC session :	MEPC 62	MEPC 63	MEPC 64	MEPC 65	MEPC 66	MEPC 67
Date (for 2012, 2013, 2014 and 2015, the dates are tentative) :	July 2011	February 2012	October 2012	[July 2013]	[March 2014]	[October 2014]
Guidelines on ship specific voluntary structural enhancement to increase safety of a ship (two sessions after receiving proposal; time schedule shown in right is the earliest possibility )			Finalization			
Consideration of CO <sub>2</sub> abatement technologies (Conversion factors/Guidelines) (three sessions after receiving proposal; time schedule shown in right is the earliest possibility)				Finalization		
Consideration of Guidelines on propulsion power needed to maintain the manoeuvrability of the ship under adverse conditions		Finalization				
Identification and development of other guidelines or supporting documents for technical and operational measures						

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## ANNEX 10

### TERMS OF REFERENCE FOR INTERSESSIONAL MEETING OF THE WORKING GROUP ON ENERGY EFFICIENCY MEASURES FOR SHIPS

The second Intersessional Meeting of the Working Group on Energy Efficiency Measures for Ships (EE-WG 2) is instructed, taking into account all relevant documents, to:

- .1 further improve the following Guidelines, with a view to finalization at MEPC 63:
  - .1 draft Guidelines on the method of calculation of the Energy Efficiency Design Index (EEDI) for new ships;
  - .2 draft Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP);
  - .3 draft Guidelines on Survey and Certification of the EEDI;
  - .4 draft interim Guidelines for determining minimum propulsion power and speed to enable safe manoeuvring in adverse weather conditions;
- .2 consider developing EEDI frameworks for other ship types and propulsion systems not covered by the draft Guidelines on the method of calculation of the Energy Efficiency Design Index (EEDI) for new ships;
- .3 identify the necessity of other Guidelines or supporting documents for technical and operational measures;
- .4 consider EEDI for larger size segments of tankers and bulk carriers;
- .5 consider improvement of the guidelines on the Ship Energy Efficiency Operational Indicator (EEOI) (MEPC.1/Circ.684); and
- .6 submit a written report to MEPC 63.

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## ANNEX 11

### STATEMENT BY THE OBSERVER OF CESA DURING THE DEBATE ON GHG ISSUES

#### Statement by the observer of CESA on document MEPC 62/5/10 (China *et al.*)

With this intervention the European shipbuilders and ship repairers would like to comment technological aspects of MEPC 62/5/10, in particular the proposal of China, Saudi Arabia and South Africa regarding technology transfer contained in paragraphs 9, 15 and 16.

Although CESA would like express the willingness of the shipbuilding industry to contribute to the principles of technical co-operation, design transparency and technology transfer in order to contribute to the shared search for solutions to the major challenges, including climate change, we have to voice grave concern regarding the draft regulation [x].

The wording proposed in the second and third sentence will not promote technical assistance and capacity building, nor will it facilitate the development of energy efficiency enhancing technology. Due to the provision to send all new ship designs and EEDI reducing technology into the public domain combined with the complete absence of any provisions ensuring the protection of intellectual property rights (IPR) this regulation, if adopted, would in fact terminate all industry investments into research and innovation necessary to develop CO<sub>2</sub> reduction options beyond slow steaming and other operational measures.

In modern shipping both environment protection and competitiveness of the shipbuilding industry depend on the continuous development of the state of the art in naval architecture and advanced emission reduction technology. This win-win situation for regulators as well as for producers of high-tech ships and marine equipment should be maintained through a high level of IPR protection. If sensitive design data have to be disclosed they will fall victim to product piracy inhibiting any return of investment. Unrestricted design transparency without protective measures for the knowledge assets would jeopardise the incentive and financial means to innovate. This is not capacity building, but destruction of industrial know-how. Are IMO flag states willing to transfer the burden of technological development to state owned research institutes alone and to exclusively finance innovation from public sources?

Therefore any IMO activities on technology transfer, in particular the work of an *Ad Hoc Capacity-building Needs Analysis Group* as proposed in paragraph 16, should be firmly based on internationally agreed IPR principles and accompanied by concrete, appropriate and effective protective measures in line with the strategic goals of the World Intellectual Property Organization and in intensive collaboration all stakeholders including WIPO as the responsible UN special agency. Such a working group could also analyse the maritime meaning of the term "developing countries" and "capacity building" in light of the fact that China has increased its ship production by 1500% since 2000 recently becoming the shipbuilding nation number 1.

*"Regulation [x] – Promotion of Technical Assistance and Capacity Building: In order to promote the reduction of GHG emissions from international shipping, transparency of technology **shall** be increased in the implementation of technical measures of the EEDI. All new ship designs and technology which reduce the attained EEDI value of a ship **shall** be open to the public. Developed countries **shall** transfer their technology and provide financial support to developing countries for their capacity building so as to enhance their ability to satisfy these new requirements."*

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**ANNEX 12**

**RESOLUTION MEPC.200(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO  
THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF  
POLLUTION FROM SHIPS, 1973**

**(Special Area Provisions and the Designation of the Baltic Sea as a Special Area under  
MARPOL Annex IV)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED draft amendments to Annex IV of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex IV of MARPOL 73/78, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012 unless, prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex;
5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

ANNEX

**AMENDMENTS TO MARPOL ANNEX IV**

1 *New paragraphs 5bis, 7bis, and 7ter are added to regulation 1:*

"5bis *Special area* means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by sewage is required.

The special areas are:

- .1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I; and
- .2 any other sea area designated by the Organization in accordance with criteria and procedures for designation of special areas with respect to prevention of pollution by sewage<sup>1</sup>.

7bis *A passenger* means every person other than:

- .1 the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and
- .2 a child under one year of age.

7ter *A passenger ship* means a ship which carries more than twelve passengers.

For the application of regulation 11.3, a *new passenger ship* is a passenger ship:

- .1 for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, or which is in a similar stage of construction, on or after 1 January 2016; or
- .2 the delivery of which is two years or more after 1 January 2016.

*An existing passenger ship* is a passenger ship which is not a new passenger ship."

2 *New paragraph 2 is added to regulation 9:*

"2 By derogation from paragraph 1, every passenger ship which, in accordance with regulation 2, is required to comply with the provisions of this Annex, and for which regulation 11.3 applies while in a special area, shall be equipped with one of the following sewage systems:

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<sup>1</sup> Refer to Assembly resolution A.927(22), Guidelines for the designation of special areas under MARPOL 73/78 and guidelines for the identification and designation of particularly sensitive sea areas.

- .1 a sewage treatment plant which shall be of a type approved by the Administration, taking into account the standards and test methods developed by the Organization,<sup>2</sup> or
- .2 a holding tank of the capacity to the satisfaction of the Administration for the retention of all sewage, having regard to the operation of the ship, the number of persons on board and other relevant factors. The holding tank shall be constructed to the satisfaction of the Administration and shall have a means to indicate visually the amount of its contents."

3 *Regulation 11 is replaced by the following:*

**Regulation 11**

*Discharge of sewage*

"A *Discharge of sewage from ships other than passenger ships in all areas and discharge of sewage from passenger ships outside special areas*

1 Subject to the provisions of regulation 3 of this Annex, the discharge of sewage into the sea is prohibited, except when:

- .1 the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance with regulation 9.1.2 of this Annex at a distance of more than 3 nautical miles from the nearest land, or sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that, in any case, the sewage that has been stored in holding tanks, or sewage originating from spaces containing living animals, shall not be discharged instantaneously but at a moderate rate when the ship is *en route* and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization<sup>3</sup>; or
- .2 the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.1.1 of this Annex, and the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

2 The provisions of paragraph 1 shall not apply to ships operating in the waters under the jurisdiction of a State and visiting ships from other States while they are in these waters and are discharging sewage in accordance with such less stringent requirements as may be imposed by such State.

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<sup>2</sup> Refer to the [draft 2012] Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants adopted by the Marine Environment Protection Committee of the Organization by [resolution MEPC....].

<sup>3</sup> Refer to the Recommendation on standards for the rate of discharge of untreated sewage from ships adopted by the Marine Environmental Protection Committee of the Organization by resolution MEPC.157(55).

*B Discharge of sewage from passenger ships within a special area*

3 Subject to the provisions of regulation 3 of this Annex, the discharge of sewage from a passenger ship within a special area shall be prohibited:

- a) for new passenger ships on, or after 1 January 2016, subject to regulation 12*bis*, subparagraph 2; and
- b) for existing passenger ships on, or after 1 January 2018, subject to regulation 12*bis*, subparagraph 2,

except when the following conditions are satisfied:

the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.2.1 of this Annex, and the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

*C General requirements*

4 When the sewage is mixed with wastes or waste water covered by other Annexes of MARPOL, the requirements of those Annexes shall be complied with in addition to the requirements of this Annex."

4 *New regulation 12bis is added as follows:*

**"12bis Reception facilities for passenger ships in Special Areas**

.1 Each Party, the coastline of which borders a special area, undertakes to ensure that:

- .1 facilities for the reception of sewage are provided in ports and terminals which are in a special area and which are used by passenger ships;
- .2 the facilities are adequate to meet the needs of those passenger ships; and
- .3 the facilities are operated so as not to cause undue delay to those passenger ships.

.2 The Government of each Party concerned shall notify the Organization of the measures taken pursuant to subparagraph .1 of this regulation. Upon receipt of sufficient notifications in accordance with subparagraph .1 the Organization shall establish a date from which the requirements of regulation 11.3 in respect of the area in question shall take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date. Until the date so established, ships while navigating in the special area shall comply with the requirements of regulation 11.1 of this Annex."



**AMENDMENTS TO THE  
FORM OF INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE**

1 *The following text is added under the heading "Particulars of ship":*

Type of ship for the application of regulation 11.3:<sup>\*</sup>

New/Existing passenger ship

Ship other than a passenger ship

2 *Amend paragraph <sup>\*</sup>1.1. to read as follows:*

<sup>\*</sup>1.1. Description of the sewage treatment plant:

Type of sewage treatment plant .....

Name of manufacturer .....

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.2(VI).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.159(55).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in [resolution MEPC....].<sup>§</sup>

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\* Delete as appropriate.

§ The number of the MEPC resolution will be inserted when the standards have been adopted by the MEPC at a future session.



**ANNEX 13**

**RESOLUTION MEPC.201(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO  
THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF  
POLLUTION FROM SHIPS, 1973**

**(Revised MARPOL Annex V)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED draft amendments to Annex V of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex V of MARPOL 73/78, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012 unless, prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex;
5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

ANNEX

**REVISED MARPOL ANNEX V**

**REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS**

**Regulation 1**

*Definitions*

For the purposes of this Annex:

- 1 *Animal carcasses* means the bodies of any animals that are carried on board as cargo and that die or are euthanized during the voyage.
- 2 *Cargo residues* means the remnants of any cargo which are not covered by other Annexes to the present Convention and which remain on the deck or in holds following loading or unloading, including loading and unloading excess or spillage, whether in wet or dry condition or entrained in wash water but does not include cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship.
- 3 *Cooking oil* means any type of edible oil or animal fat used or intended to be used for the preparation or cooking of food, but does not include the food itself that is prepared using these oils.
- 4 *Domestic wastes* means all types of wastes not covered by other Annexes that are generated in the accommodation spaces on board the ship. Domestic wastes does not include grey water.
- 5 *En route* means that the ship is underway at sea on a course or courses, including deviation from the shortest direct route, which as far as practicable for navigational purposes, will cause any discharge to be spread over as great an area of the sea as is reasonable and practicable.
- 6 *Fishing gear* means any physical device or part thereof or combination of items that may be placed on or in the water or on the sea-bed with the intended purpose of capturing, or controlling for subsequent capture or harvesting, marine or fresh water organisms.
- 7 *Fixed or floating platforms* means fixed or floating structures located at sea which are engaged in the exploration, exploitation or associated offshore processing of sea-bed mineral resources.
- 8 *Food wastes* means any spoiled or unspoiled food substances and includes fruits, vegetables, dairy products, poultry, meat products and food scraps generated aboard ship.
- 9 *Garbage* means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish

including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.

- 10 *Incinerator ashes* means ash and clinkers resulting from shipboard incinerators used for the incineration of garbage.
- 11 *Nearest land*. The term "from the nearest land" means from the baseline from which the territorial sea of the territory in question is established in accordance with international law, except that, for the purposes of the present Annex, "from the nearest land" off the north-eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in:
- latitude 11°00' S, longitude 142°08' E  
to a point in latitude 10°35' S, longitude 141°55' E,  
thence to a point latitude 10°00' S, longitude 142°00' E,  
thence to a point latitude 09°10' S, longitude 143°52' E,  
thence to a point latitude 09°00' S, longitude 144°30' E,  
thence to a point latitude 10°41' S, longitude 145°00' E,  
thence to a point latitude 13°00' S, longitude 145°00' E,  
thence to a point latitude 15°00' S, longitude 146°00' E,  
thence to a point latitude 17°30' S, longitude 147°00' E,  
thence to a point latitude 21°00' S, longitude 152°55' E,  
thence to a point latitude 24°30' S, longitude 154°00' E,  
thence to a point on the coast of Australia in  
latitude 24°42' S, longitude 153°15' E.
- 12 *Operational wastes* means all solid wastes (including slurries) not covered by other Annexes that are collected on board during normal maintenance or operations of a ship, or used for cargo stowage and handling. Operational wastes also includes cleaning agents and additives contained in cargo hold and external wash water. Operational wastes does not include grey water, bilge water, or other similar discharges essential to the operation of a ship, taking into account the guidelines developed by the Organization.
- 13 *Plastic* means a solid material which contains as an essential ingredient one or more high molecular mass polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic. For the purposes of this annex, "all plastics" means all garbage that consists of or includes plastic in any form, including synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products.
- 14 *Special area* means a sea area where for recognized technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by garbage is required.

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, the Gulfs area, the North Sea area, the Antarctic area and the Wider Caribbean Region, which are defined as follows:

- .1 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 5°36' W.

- .2 The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia and 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.
- .3 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.
- .4 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° 28.5' N, 43° 19.6' E) and Husn Murad (12° 40.4' N, 43° 30.2' E).
- .5 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 al Fasteh (25° 04' N, 61° 25' E).
- .6 The North Sea area means the North Sea proper including seas therein with the boundary between:
  - .1 the North Sea southwards of latitude 62° N and eastwards of longitude 4° W;
  - .2 the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8' N; and
  - .3 the English Channel and its approaches eastwards of longitude 5° W and northwards of latitude 48° 30' N.
- .7 The Antarctic area means the sea area south of latitude 60° S.
- .8 The Wider Caribbean Region means the Gulf of Mexico and Caribbean Sea proper including the bays and seas therein and that portion of the Atlantic Ocean within the boundary constituted by the 30° N parallel from Florida eastward to 77°30' W meridian, thence a rhumb line to the intersection of 20° N parallel and 59° W meridian, thence a rhumb line to the intersection of 7°20' N parallel and 50° W meridian, thence a rhumb line drawn southwesterly to the eastern boundary of French Guiana.

## **Regulation 2**

### *Application*

Unless expressly provided otherwise, the provisions of this Annex shall apply to all ships.

## **Regulation 3**

### *General prohibition on discharge of garbage into the sea*

- 1 Discharge of all garbage into the sea is prohibited, except as provided otherwise in regulations 4, 5, 6 and 7 of this Annex.
- 2 Except as provided in regulation 7 of this Annex, discharge into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products is prohibited.
- 3 Except as provided in regulation 7 of this Annex, the discharge into the sea of cooking oil is prohibited.

#### **Regulation 4**

##### *Discharge of garbage outside special areas*

1 Subject to the provisions of regulations 5, 6, and 7 of this Annex, discharge of the following garbage into the sea outside special areas shall only be permitted while the ship is en route and as far as practicable from the nearest land, but in any case not less than:

- .1 3 nautical miles from the nearest land for food wastes which have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.
- .2 12 nautical miles from the nearest land for food wastes that have not been treated in accordance with subparagraph .1 above.
- .3 12 nautical miles from the nearest land for cargo residues that cannot be recovered using commonly available methods for unloading. These cargo residues shall not contain any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization.
- .4 For animal carcasses, discharge shall occur as far from the nearest land as possible, taking into account the guidelines developed by the Organization.

2 Cleaning agents or additives contained in cargo hold, deck and external surfaces wash water may be discharged into the sea, but these substances must not be harmful to the marine environment, taking into account guidelines developed by the Organization.

3 When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

#### **Regulation 5**

##### *Special requirements for discharge of garbage from fixed or floating platforms*

1 Subject to the provisions of paragraph 2 of this regulation, the discharge into the sea of any garbage is prohibited from fixed or floating platforms and from all other ships when alongside or within 500 m of such platforms.

2 Food wastes may be discharged into the sea from fixed or floating platforms located more than 12 nautical miles from the nearest land and from all other ships when alongside or within 500 m of such platforms, but only when the wastes have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.

#### **Regulation 6**

##### *Discharge of garbage within special areas*

1 Discharge of the following garbage into the sea within special areas shall only be permitted while the ship is en route and as follows:

- .1 Discharge into the sea of food wastes as far as practicable from the nearest land, but not less than 12 nautical miles from the nearest land or the nearest ice shelf. Food wastes shall be comminuted or ground and shall be capable

of passing through a screen with openings no greater than 25 mm. Food wastes shall not be contaminated by any other garbage type. Discharge of introduced avian products, including poultry and poultry parts, is not permitted in the Antarctic area unless it has been treated to be made sterile.

.2 Discharge of cargo residues that cannot be recovered using commonly available methods for unloading, where all the following conditions are satisfied:

.1 Cargo residues, cleaning agents or additives, contained in hold washing water do not include any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization;

.2 Both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between those ports;

.3 No adequate reception facilities are available at those ports taking into account guidelines developed by the Organization; and

.4 Where the conditions of subparagraphs 2.1, 2.2 and 2.3 of this paragraph have been fulfilled, discharge of cargo hold washing water containing residues shall be made as far as practicable from the nearest land or the nearest ice shelf and not less than 12 nautical miles from the nearest land or the nearest ice shelf.

2 Cleaning agents or additives contained in deck and external surfaces wash water may be discharged into the sea, but only if these substances are not harmful to the marine environment, taking into account guidelines developed by the Organization.

3 The following rules (in addition to the rules in paragraph 1 of this regulation) apply with respect to the Antarctic area:

.1 Each Party at whose ports ships depart en route to or arrive 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.

.2 Each Party 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 have concluded arrangements to discharge such garbage at a reception facility after leaving the area.

4 When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.



**Regulation 7**  
*Exceptions*

- 1 Regulations 3, 4, 5 and 6 of this Annex shall not apply to:
  - .1 The discharge of garbage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or
  - .2 The accidental loss of garbage resulting from damage to a ship or its equipment, provided that all reasonable precautions have been taken before and after the occurrence of the damage, to prevent or minimize the accidental loss; or
  - .3 The accidental loss of fishing gear from a ship provided that all reasonable precautions have been taken to prevent such loss; or
  - .4 The discharge of fishing gear from a ship for the protection of the marine environment or for the safety of that ship or its crew.
- 2 Exception of *en route*:
  - .1 The *en route* requirements of regulations 4 and 6 shall not apply to the discharge of food wastes where it is clear the retention on board of these food wastes presents an imminent health risk to the people on board.

**Regulation 8**  
*Reception facilities*

- 1 Each Party undertakes to ensure the provision of adequate facilities at ports and terminals for the reception of garbage without causing undue delay to ships, and according to the needs of the ships using them.
- 2 Each Party shall notify the Organization for transmission to the Contracting Parties concerned of all cases where the facilities provided under this regulation are alleged to be inadequate.
- 3 Reception facilities within special areas
  - .1 Each Party, the coastline of which borders a special area, undertakes to ensure that as soon as possible, in all ports and terminals within the special area, adequate reception facilities are provided, taking into account the needs of ships operating in these areas.
  - .2 Each Party concerned shall notify the Organization of the measures taken pursuant to subparagraph 3.1 of this regulation. Upon receipt of sufficient notifications the Organization shall establish a date from which the requirements of regulation 6 of this Annex in respect of the area in question are to take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date. Until the date so established, ships that are navigating in a special area shall comply with the requirements of regulation 4 of this Annex as regards discharges outside special areas.

## **Regulation 9**

### *Port State control on operational requirements<sup>1</sup>*

1 A ship when in a port or an offshore terminal 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.

## **Regulation 10**

### *Placards, garbage management plans<sup>2</sup> and garbage record-keeping*

1 .1 Every ship of 12 m or more in length overall and fixed or floating platforms shall display placards which notify the crew and passengers of the discharge requirements of regulations 3, 4, 5 and 6 of this Annex, as applicable.

.2 The placards shall be written in the working language of the ship's crew and, for ships engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, shall also be in English, French or Spanish.

2 Every ship of 100 gross tonnage and above, and every ship which is certified to carry 15 or more persons, and fixed or floating platforms shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for minimizing, collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person or persons in charge of carrying out the plan. Such a plan shall be based on the guidelines developed by the Organization<sup>2</sup> and written in the working language of the crew.

3 Every ship of 400 gross tonnage and above and every ship which is certified to carry 15 or more persons engaged in voyages to ports or offshore terminals under the jurisdiction of another Party to the Convention and every fixed or floating platform shall be provided with a Garbage Record Book. The Garbage Record Book, whether as a part of the ship's official log-book or otherwise, shall be in the form specified in the appendix to this Annex:

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<sup>1</sup> Refer to the Procedures for port State control adopted by the Organization by resolution A.787(19) and amended by A.882(21); see IMO sales publication IA650E.

<sup>2</sup> Refer to the Guidelines for the development of garbage management plans adopted by the Marine Environment Protection Committee of the Organization by resolution MEPC.71(38); see MEPC/Circ.317 and IMO sales publication IA656E.

- .1 Each discharge into the sea or to a reception facility, or a completed incineration, shall be promptly recorded in the Garbage Record Book and signed for on the date of the discharge or incineration by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the master of the ship. The entries in the Garbage Record Book shall be at least in English, French or Spanish. Where the entries are also made in an official language of the State whose flag the ship is entitled to fly, the entries in that language shall prevail in case of a dispute or discrepancy;
  - .2 The entry for each discharge or incineration shall include date and time, position of the ship, category of the garbage and the estimated amount discharged or incinerated;
  - .3 The Garbage Record Book shall be kept on board the ship or the fixed or floating platform, and in such a place as to be readily available for inspection at all reasonable times. This document shall be preserved for a period of at least two years from the date of the last entry made in it;
  - .4 In the event of any discharge or accidental loss referred to in regulation 7 of this Annex an entry shall be made in the Garbage Record Book, or in the case of any ship of less than 400 gross tonnage, an entry shall be made in the ship's official log-book, of the location, circumstances of, and the reasons for the discharge or loss, details of the items discharged or lost, and the reasonable precautions taken to prevent or minimize such discharge or accidental loss.
- 4 The Administration may waive the requirements for Garbage Record Books for:
- .1 Any ship engaged on voyages of one (1) hour or less in duration which is certified to carry 15 or more persons; or
  - .2 Fixed or floating platforms.
- 5 The competent authority of the Government of a Party to the Convention may inspect the Garbage Record Books or ship's official log-book on board any ship to which this regulation applies while the ship is in its ports or offshore terminals and may make a copy of any entry in those books, and may require the master of the ship to certify that the copy is a true copy of such an entry. Any copy so made, which has been certified by the master of the ship as a true copy of an entry in the ship's Garbage Record Book or ship's official log-book, shall be admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of a Garbage Record Book or ship's official log-book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.
- 6 The accidental loss or discharge of fishing gear as provided for in regulations 7.1.3 and 7.1.3*bis* which poses a significant threat to the marine environment or navigation shall be reported to the State whose flag the ship is entitled to fly, and, where the loss or discharge occurs within waters subject to the jurisdiction of a coastal State, also to that coastal State.

**APPENDIX**  
**FORM OF GARBAGE RECORD BOOK**

Name of ship: \_\_\_\_\_

Distinctive number or letters: \_\_\_\_\_

IMO No.: \_\_\_\_\_

Period: \_\_\_\_\_ From: \_\_\_\_\_ To: \_\_\_\_\_

### **1 Introduction**

In accordance with regulation 10 of Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL), a record is to be kept of each discharge operation or completed incineration. This includes discharges into the sea, to reception facilities, or to other ships, as well as the accidental loss of garbage.

### **2 Garbage and garbage management**

*Garbage* means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.

The Guidelines for the Implementation of Annex V of MARPOL<sup>3</sup> should also be referred to for relevant information.

### **3 Description of the garbage**

Garbage is to be grouped into categories for the purposes of the Garbage Record Book (or ship's official log-book) as follows:

- A      Plastics
- B      Food wastes
- C      Domestic Wastes
- D      Cooking Oil
- E      Incinerator ashes
- F      Operational wastes

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<sup>3</sup> Refer to the Guidelines for the Implementation of Annex V of MARPOL 73/78, as amended by resolutions.

- G Cargo residues
- H Animal Carcass(es)
- I Fishing Gear<sup>4</sup>

#### **4 Entries in the Garbage Record Book**

4.1 Entries in the Garbage Record Book shall be made on each of the following occasions:

4.1.1 When garbage is discharged to a reception facility<sup>5</sup> ashore or to other ships:

- .1 Date and time of discharge
- .2 Port or facility, or name of ship
- .3 Categories of garbage discharged
- .4 Estimated amount discharged for each category in cubic metres
- .5 Signature of officer in charge of the operation.

4.1.2 When garbage is incinerated:

- .1 Date and time of start and stop of incineration
- .2 Position of the ship (latitude and longitude) at the start and stop of incineration
- .3 Categories of garbage incinerated
- .4 Estimated amount incinerated in cubic metres
- .5 Signature of the officer in charge of the operation.

4.1.3 When garbage is discharged into the sea in accordance with regulations 4, 5 or 6 of Annex V of MARPOL:

- .1 Date and time of discharge
- .2 Position of the ship (latitude and longitude). Note: for cargo residue discharges, include discharge start and stop positions.
- .3 Category of garbage discharged
- .4 Estimated amount discharged for each category in cubic metres
- .5 Signature of the officer in charge of the operation.

4.1.4 Accidental or other exceptional discharges or loss of garbage into the sea, including in accordance with regulation 7 of Annex V of MARPOL:

- .1 Date and time of occurrence
- .2 Port or position of the ship at time of occurrence (latitude, longitude and water depth if known)
- .3 Categories of garbage discharged or lost
- .4 Estimated amount for each category in cubic metres
- .5 The reason for the discharge or loss and general remarks.

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<sup>4</sup> Refer to Guidelines to be developed by the Organization.

<sup>5</sup> Ship's masters should obtain from the operator of the reception facilities, which includes barges and trucks, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates must be kept together with the Garbage Record Book.

4.2 Amount of garbage

The amount of garbage on board should be estimated in cubic metres, if possible separately according to category. The Garbage Record Book contains many references to estimated amount of garbage. It is recognized that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimates will differ before and after processing. Some processing procedures may not allow for a usable estimate of volume, e.g., the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

**RECORD OF GARBAGE DISCHARGES**

Ship's name: \_\_\_\_\_

Distinctive No., or letters: \_\_\_\_\_

IMO No.: \_\_\_\_\_

Garbage categories:

- A. Plastics
- B. Food wastes
- C. Domestic wastes (e.g., paper products, rags, glass, metal, bottles, crockery, etc.)
- D. Cooking oil
- E. Incinerator Ashes
- F. Operational wastes
- G. Cargo residues
- H. Animal Carcass(es)
- I. Fishing gear

**NEW TABLE LAYOUT AS BELOW:**

Date/ Time	Position of the Ship/Remarks (e.g., accidental loss)	Category	Estimated Amount Discharged or Incinerated	To Sea	To Reception Facility	Incineration	Certification/ Signature

Master's signature: \_\_\_\_\_ Date: \_\_\_\_\_

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**ANNEX 14**

**RESOLUTION MEPC.202(62)**

**Adopted on 15 July 2011**

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

**(Designation of the United States Caribbean Sea Emission Control Area and exemption of certain ships operating in the North American Emission Control Area and the United States Caribbean Sea Emission Control Area under regulations 13 and 14 and Appendix VII of MARPOL Annex VI)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships was added to the 1973 Convention (hereinafter referred to as "Annex VI"),

NOTING FURTHER that the revised Annex VI was adopted by resolution MEPC.176(58) and entered into force on 1 July 2010,

HAVING CONSIDERED draft amendments to the revised Annex VI,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012, unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex.



ANNEX

**AMENDMENTS TO REGULATIONS 13 AND 14 AND APPENDIX VII  
OF THE REVISED MARPOL ANNEX VI**

1 Paragraph 6 of regulation 13 is replaced by the following:

- "6 For the purpose of this regulation, emission control areas shall be:
- .1 the North American area, which means the area described by the coordinates provided in Appendix VII to this Annex;
  - .2 the United States Caribbean Sea area, which means the area described by the coordinates provided in Appendix VII to this Annex; and
  - .3 any other sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in Appendix III to this Annex."

2 Paragraph 7.3 of regulation 13 is amended to read as follows:

"7.3 With regard to a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which paragraph 7.1 of this regulation applies, indicate that either an approved method has been applied pursuant to paragraph 7.1.1 of this regulation or the engine has been certified pursuant to paragraph 7.1.2 of this regulation or that an approved method does not yet exist or is not yet commercially available as described in paragraph 7.2 of this regulation."

3 Paragraph 3 of regulation 14 is replaced by the following:

- "3 For the purpose of this regulation, emission control areas shall include:
- .1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I and the North Sea area as defined in regulation 1.12.6 of Annex V;
  - .2 the North American area as described by the coordinates provided in Appendix VII to this Annex;
  - .3 the United States Caribbean Sea area as described by the coordinates provided in Appendix VII to this Annex; and
  - .4 any other sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in Appendix III to this Annex."

- 4 A new subparagraph 4 is added to paragraph 4 of regulation 14 to read as follows:
- "4 Prior to 1 January 2020, the sulphur content of fuel oil referred to in paragraph 4 of this regulation shall not apply to ships operating in the North American area or the United States Caribbean Sea area defined in paragraph 3, built on or before 1 August 2011 that are powered by propulsion boilers that were not originally designed for continued operation on marine distillate fuel or natural gas."
- 5 Paragraph 7 of regulation 14 is replaced by the following:
- "7 During the first twelve months immediately following entry into force of an amendment designating a specific emission control area under paragraph 3 of this regulation, ships operating in that emission control area are exempt from the requirements in paragraphs 4 and 6 of this regulation and from the requirements of paragraph 5 of this regulation insofar as they relate to paragraph 4 of this regulation<sup>1</sup>."

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<sup>1</sup> The 12 month exemption provided by paragraph 7 will apply for the North American emission control area until 1 August 2012.

The 12 month exemption provided by paragraph 7 will apply for the United States Caribbean Sea emission control area until 1 January 2014.

6 Appendix VII is amended as follows:

**"Appendix VII  
Emission Control Areas  
(regulation 13.6 and regulation 14.3)**

- .1 The boundaries of emission control areas designated under regulations 13.6 and 14.3, other than the Baltic Sea and the North Sea areas, are set forth in this appendix.
- .2 (Existing text for the North American area)
- .3 The United States Caribbean Sea area includes:
  - .1 the sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the following coordinates:

POINT	LATITUDE	LONGITUDE			
1	17° 18' 37" N.	67° 32' 14" W.	28	18° 22' 22" N.	64° 38' 23" W.
2	19° 11' 14" N.	67° 26' 45" W.	29	18° 21' 57" N.	64° 40' 60" W.
3	19° 30' 28" N.	65° 16' 48" W.	30	18° 21' 51" N.	64° 40' 15" W.
4	19° 12' 25" N.	65° 6' 8" W.	31	18° 21' 22" N.	64° 38' 16" W.
5	18° 45' 13" N.	65° 0' 22" W.	32	18° 20' 39" N.	64° 38' 33" W.
6	18° 41' 14" N.	64° 59' 33" W.	33	18° 19' 15" N.	64° 38' 14" W.
7	18° 29' 22" N.	64° 53' 51" W.	34	18° 19' 7" N.	64° 38' 16" W.
8	18° 27' 35" N.	64° 53' 22" W.	35	18° 17' 23" N.	64° 39' 38" W.
9	18° 25' 21" N.	64° 52' 39" W.	36	18° 16' 43" N.	64° 39' 41" W.
10	18° 24' 30" N.	64° 52' 19" W.	37	18° 11' 33" N.	64° 38' 58" W.
11	18° 23' 51" N.	64° 51' 50" W.	38	18° 3' 2" N.	64° 38' 3" W.
12	18° 23' 42" N.	64° 51' 23" W.	39	18° 2' 56" N.	64° 29' 35" W.
13	18° 23' 36" N.	64° 50' 17" W.	40	18° 2' 51" N.	64° 27' 2" W.
14	18° 23' 48" N.	64° 49' 41" W.	41	18° 2' 30" N.	64° 21' 8" W.
15	18° 24' 11" N.	64° 49' 0" W.	42	18° 2' 31" N.	64° 20' 8" W.
16	18° 24' 28" N.	64° 47' 57" W.	43	18° 2' 3" N.	64° 15' 57" W.
17	18° 24' 18" N.	64° 47' 1" W.	44	18° 0' 12" N.	64° 2' 29" W.
18	18° 23' 13" N.	64° 46' 37" W.	45	17° 59' 58" N.	64° 1' 4" W.
19	18° 22' 37" N.	64° 45' 20" W.	46	17° 58' 47" N.	63° 57' 1" W.
20	18° 22' 39" N.	64° 44' 42" W.	47	17° 57' 51" N.	63° 53' 54" W.
21	18° 22' 42" N.	64° 44' 36" W.	48	17° 56' 38" N.	63° 53' 21" W.
22	18° 22' 37" N.	64° 44' 24" W.	49	17° 39' 40" N.	63° 54' 53" W.
23	18° 22' 39" N.	64° 43' 42" W.	50	17° 37' 8" N.	63° 55' 10" W.
24	18° 22' 30" N.	64° 43' 36" W.	51	17° 30' 21" N.	63° 55' 56" W.
25	18° 22' 25" N.	64° 42' 58" W.	52	17° 11' 36" N.	63° 57' 57" W.
26	18° 22' 26" N.	64° 42' 28" W.	53	17° 4' 60" N.	63° 58' 41" W.
27	18° 22' 15" N.	64° 42' 3" W.	54	16° 59' 49" N.	63° 59' 18" W.
			55	17° 18' 37" N.	67° 32' 14" W.

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## ANNEX 15

### OUTLINE FOR A DRAFT MEPC RESOLUTION IN RELATION TO THE DESIGNATION OF THE BALTIC SEA AS A SPECIAL AREA UNDER MARPOL ANNEX IV\*

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

...

RECALLING that passenger ships which, in accordance with MARPOL Annex IV regulation 2, are required to comply with the provisions of MARPOL Annex IV, whilst in a special area, shall be equipped with either a sewage treatment plant or a holding tank,

RECALLING also the ongoing work in the DE Sub-Committee on the development of the revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants which is due to be finalized during 2012,

RECALLING further the need for adequate, cost-effective technical means to be developed so as to make it possible for the shipping industry to comply with the discharge standards of regulation 11.3 of MARPOL Annex IV,

BEING CONSCIOUS of the importance of the availability of adequate technical means so as to make it possible to comply with the discharge standards under MARPOL Annex IV,

HAVING CONSIDERED the amendments to MARPOL Annex IV,

1. RECOGNIZES the urgent need to develop adequate, cost-effective technical means to assist the shipping industry to comply with the discharge requirements of regulation 11.3 of MARPOL Annex IV for special areas;
2. CALLS for the development, without delay, of proven technical onboard equipment to make it possible to meet the discharge standards under regulation 11.3 of MARPOL Annex IV;
3. UNDERTAKES to keep under review the progress made in this respect at the DE Sub-Committee.

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\* To be further developed with a view to adoption at MEPC 63.



**ANNEX 16**

**MEPC CIRCULAR\***

**ON THE DATE OF TAKING EFFECT OF THE AMENDMENTS TO REGULATIONS 13  
AND 14 OF MARPOL ANNEX VI ADOPTED BY RESOLUTION MEPC.202(62)**

1 The Marine Environment Protection Committee, at its sixtieth session (March 2010), adopted the amendments to MARPOL Annex VI, by resolution MEPC.190(60), to designate the North American area as an emission control area for nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and particulate matter. MEPC 61 agreed that these amendments shall enter into force on 1 August 2011.

2 The Marine Environment Protection Committee, at its sixty-second session (July 2011), adopted the amendments to MARPOL Annex VI, by resolution MEPC.202(62), to designate the United States Caribbean Sea area as an emission control area for nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and particulate matter. MEPC 62 agreed that these amendments shall enter into force on 1 January 2013, upon their acceptance in accordance with article 16 of the Convention.

3 Regulation 14.7 of MARPOL Annex VI specifies that "During the first twelve months immediately following entry into force of an amendment designating a specific emission control area under paragraph 3 of this regulation, ships operating in that emission control area are exempt from the requirements in paragraph 4 and 6 of this regulation and from the requirements of paragraph 5 of this regulation insofar as they relate to paragraph 4 of this regulation".

4 In accordance with regulation 14.7, the requirement for the North American area as an emission control area under regulation 14 shall take effect on 1 August 2012, and for the United States Caribbean Sea area shall take effect on 1 January 2014.

5 Noting that the effective dates for such areas have not been specified in the adopted text of regulation 14.3, MEPC 62 requested the issuance of a circular announcing these dates in order to avoid any ambiguity.

6 Recognizing that the said amendments to regulation 14.3 of MARPOL Annex VI will enter into force in accordance with the amendment procedure as prescribed in article 16(2)(d) of the MARPOL Convention, MEPC 62 urged Member Governments to take early action before the amendments come into force.

7 Member Governments are invited to bring this circular to the attention of their Administrations, relevant shipping organizations, recognized organizations, shipping companies and other stakeholders concerned.

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**(Annexes 17 to 37 to the report are contained in document MEPC 62/24/Add.1)**

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\* Distributed as MEPC.1/Circ.756.