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To: relevant departments of CCS Headquarters, CCS surveyors, shipbuilders, ship recycling facility(ies), ship repairers, equipment suppliers, product manufacturers, shipowners and ship management companies

Notice on Preparation for Implementation of IMO "Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009" and MEPC.179(59) "Guidelines for the Development of the Inventory of Hazardous Materials"

Section One. Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009"

On 15 May 2009, IMO adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Hong Kong Convention") on the International Conference on the Safe and Environmentally Sound Recycling of Ships which was convened in Hong Kong, the P.R.China. The Hong Kong Convention applies to 500 GT or more ships entitled to fly the flag of a Party or operating under a Party's authority and Ship Recycling Facility(ies) operating under the jurisdiction of a Party. For how to entry into force, please refer to the ARTICLE 17.

The Hong Kong Convention provides clear definitions for Ship, Administration, Competent Authority(ies), Hazardous Material, Ship Recycling, Ship Recycling Facility(ies), Recycling Company, etc., and also stipulates the requirements on Survey

and certification of ships, Inspection of ships, Controls related to Ship Recycling, Authorization, Exchange of information, etc. in general.

As an annex of the Hong Kong Convention, the Regulations for Safe and Environmentally Sound Recycling of Ships (hereinafter referred to as "the Regulations") further provides definitions for New Ship, New Installation, Shipowner, Safe-for-entry, Safe-for-hot work, etc., and it's established more detailed requirements which are related to Ship, Ship Recycling Facility(ies), Reporting, Certification Forms, etc.

Part A. Requirements for Ships

For the Inventory of Hazardous Materials (hereinafter referred to as "the Inventory"), according to the Regulations:

- The Inventory shall be kept on board the ship for all new ships. Materials listed in Appendix 1 and Appendix 2 to the Hong Kong Convention is to be included in the Part I of the Inventory;
- For existing ships, the Inventory, which is based on the visual/sampling check plan prepared as per the Guidelines for the Development of the Inventory of Hazardous Materials (hereinafter referred to as "the Guidelines"), is developed within the required timetable（not later than 5 years after the entry into force of the Hong Kong Convention, or before going for recycling if this is earlier）and the Hazardous Materials listed in Appendix 1 shall be identified at least;
- For all ships, Part I of the Inventory shall be properly maintained and updated throughout the operational life of the ship;
- Prior to recycling the Inventory shall incorporate Part II for operationally generated wastes and Part III for stores;
- The completed Inventory, including Part I, Part II and Part III, shall be verified either by the Administration or by any person or organization authorized by it.

According to the Regulations, ships to which the Hong Kong Convention applies shall be surveyed as follows, either by the Administration, or by nominated surveyors or organizations recognized by it:

- **Initial survey**

Before the ship is put in service, or before the International Certificate on Inventory of Hazardous Materials is issued, initial survey shall be carried out and verify that Part I of the Inventory is in accordance with the requirements of the Hong

Kong Convention. The International Certificate on Inventory of Hazardous Materials (hereinafter referred to as "ICIHM"), which shall be valid not exceeding five years, will be issued after successful completion of an initial survey conducted.

- 换证检验
- **Renewal survey**

Renewal survey shall verify that Part I of the Inventory required by regulation 5 is in accordance with the requirements of the Hong Kong Convention. ICIHM will be re-issued after successful completion of a renewal survey conducted with five years validity.

- 附加检验
- **Additional survey**

An additional survey, either general or partial, according to the circumstances, may be made at the request of the shipowner after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material. ICIHM shall be endorsed after successful completion of an additional survey conducted.

The survey shall be such as to ensure that any such change, replacement, or significant repair has been made in the way that the ship continues to comply with the requirements of the Hong Kong Convention, and that Part I of the Inventory is amended as necessary.

- **Final survey**

A final survey shall be carried out prior to the ship being taken out of service and before the recycling of the ship has started. The shipowner shall notify the Administration in due time and in writing of the intention to recycle a ship. International Ready for Recycling Certificate (hereinafter referred to as "IRRC"), which shall be valid not exceeding three months and may be extended if it deems necessary, will be issued after successful completion of a final survey conducted. This survey shall verify:

— that the Inventory is in accordance with the requirements of the Hong Kong Convention taking into account the guidelines

— that the Ship Recycling Plan properly reflects the information contained in the Inventory and contains information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot work conditions; and

— that the Ship Recycling Facility(ies) where the ship is to be recycled holds a valid authorization in accordance with the Hong Kong Convention.

Note: For existing ships for which both an initial survey and a final survey are conducted at the same time, IRRC shall be issued after successful completion of those two surveys conducted, it's no need to issue ICIHM.

Part B. Requirements for Ship Recycling Facility(ies)

Only Ship Recycling Facility(ies) which meet the requirements of the Chapter 3 of the Regulations can engage in the ship recycling activities. Ship Recycling Facility(ies) shall prepare Ship Recycling Facility(ies) Plan (hereinafter referred to as "SRFP") which shall be adopted by the board or the appropriate governing body of the Recycling Company, taking into account guidelines developed by IMO. An emergency preparedness and response plan, reporting and management procedures, etc. also need to be established

Ship Recycling Facility(ies) shall have or issue the following certificates or documents:

1. Taking into account guidelines developed by IMO, Document of Authorization to conduct Ship Recycling (hereinafter referred to as "DASR"), which shall be valid not exceeding five years, will be issued by the Competent Authority(ies) or organizations recognized by it(them) after successful completion of verification to Ship Recycling Facility(ies) operating within the jurisdiction of that Party(ies);

2. Ship Recycling Facility(ies), which hold valid DASR, shall develop detailed Ship Recycling Plan (hereinafter referred to as "SRP") to any recycling of a ship, taking into account information provided by the shipowner. After explicit or tacit approved by the Competent Authority(ies) authorizing the Ship Recycling Facility(ies), the SRP shall be available for inspection by the Administration or any nominated surveyors or organization recognized by it;

3. Ship Recycling Facility(ies) shall submit Report of Planned Start of Ship Recycling (hereinafter referred to as "RPSSR") to its Competent Authority(ies) before the planned start of the ship recycling;

4. Statement of Completion of Ship Recycling (hereinafter referred to as "SCSR") shall be issued within 14 days of the date of partial or completed Ship Recycling in accordance with the SRP by Ship Recycling Facility(ies) and reported to

its Competent Authority(ies). The Competent Authority(ies) shall send a copy of the SCSR to the Administration which issued the IRRC for the ship.

Section Two. “Guidelines for the Development of the Inventory of Hazardous Materials”

The Guidelines was approved on 17 July 2009 by Resolution MEPC.179 (59). In order to assist relevant stakeholders (e.g., shipbuilders, ship recycling facility(ies), repairers, equipment suppliers, shipowners and ship management companies), this guidelines provide recommendations for how to develop the Inventory by using the standard formats and typical examples illustrated therein.

The Guidelines provide additional definitions, such as Homogeneous Material, Product, Supplier, Threshold Level, etc., it's definitely required the Inventory needs to include three parts: Part I for Materials contained in ship structure or equipment, Part II for operationally generated wastes and Part III for stores.

All materials need to be listed in the Inventory are classified under "Table A", "Table B", "Table C" or "Table D" according to its properties (please refer to appendix 1 for detail):

- "Table A" (materials listed in appendix 1 of the Hong Kong Convention): Part I
- "Table B" (materials listed in appendix 2 of the Hong Kong Convention): Part I
- "Table C" (potentially hazardous materials, including items which are potentially hazardous to the environment and human health at Ship Recycling Facility(ies)): Part II and Part III
- "Table D" (Regular Consumable Goods potentially containing Hazardous Materials, including goods which are not integral to a ship and are unlikely to be dismantled or treated at Ship Recycling Facility(ies)): Part III

Part A. Development, maintenance and update of the Inventory for new ships

1. Part I of the Inventory

At the design and construction stage, Part I of the Inventory should be developed using the given three steps (collection of Hazardous Materials information, utilization of Hazardous Materials information, and preparation of the Inventory by filling out standard format). The quantity and location of "Table A" materials should be listed in Part I; if materials listed in "Table B" 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 A" and "Table B" are required to be listed in Part III of the Inventory.

Part I should be developed by the shipbuilders based on the "Material Declaration" (hereinafter referred to as "MD", which identifies and declares whether or not the materials listed in "Table A" or "Table B" are present above the threshold level specified in appendix 1 of the Guidelines, and provides relevant information as well) furnished by the suppliers (e.g., equipment suppliers, parts suppliers, material suppliers).

Suppliers (tier 1 suppliers) should provide MD and Supplier's Declaration of Conformity (hereinafter referred to as "SDoC", which provides assurance that the related MD conforms to the Guidelines' requirements, and identifies the responsible entity) at the request of the shipbuilders. Tier 1 suppliers may request their suppliers (tier 2 suppliers) to provide the relevant information if they cannot develop the MD based on the information available.

If one or more materials listed in "Table A" are found to be present in concentrations above the specified threshold level, the products which contain these materials shall not be installed on a ship, except the exemption materials specified by the Convention (which still should be listed); if one or more materials listed in "Table B" are found to be present in concentrations above the specified threshold level, the products should be listed.

1. In the event of new installation, including any machinery or equipment is added to, removed or replaced or the hull coating is renewed, or any repair or conversion or sale of a ship, Part I of the Inventory should be appropriately maintained and updated.

Part II (operationally generated wastes) of the Inventory

Once the decision to recycle a ship has been taken, Part II of the Inventory should be developed before the final survey. If the wastes listed in Part II provided in "Table C" are intended for delivery with the ship to Ship Recycling Facility(ies), the quantity of the operationally generated wastes should be estimated and approximate quantities and locations of the wastes should be listed.

2. **Part III (stores) of the Inventory**

Once the decision to recycle has been taken, Part III of the Inventory should be developed before the final survey. For items which should be listed, please refer to "Table C" and "Table D" for detail.

Part B. Development, maintenance and update of the Inventory for existing ships

Part I of the Inventory

Determination of Hazardous Materials present on board existing ships should, as far as practicable, be conducted as prescribed for new ships, or alternatively, the shipowners may use the following procedures to develop Part I of the Inventory with the experts' assistance:

a. **Collection of necessary information** (prepare an "Indicative list" which identifies the equipment, system, and/or area on board that is presumed to contain Hazardous Materials)

b. **Assessment of collected information** (cover all materials listed in "Table A", materials listed in "Table B" should be listed as far as practicable, prepare a "Checklist" after assessment)

c. **Preparation of visual/sampling check plan** (based on List of equipment, system and/or area for visual check; List of equipment, system and/or area for sampling check; List of equipment, system and/or area classed as "potentially containing Hazardous Material")

d. **Onboard visual check and sampling check** (according to the visual/sampling check plan)

e. **Preparation of Part I of the Inventory and related documentation** (for materials, either "containing Hazardous Material" or "potentially containing Hazardous Material", their approximate quantity and location should be listed based on the location, from a lower level to an upper level and from a fore part to an aft part)

Note: the above-mentioned 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 requirements of maintenance and update of Part I, Part II and Part III of the Inventory for existing ships are the same with those for new ships.

Section Three. Software for development of the Inventory

According to the requirements of the Hong Kong Convention and the Guidelines, flag states, ship recycling states, shipbuilding industry, ship repair industry, shipping industry, ship recycling industry and equipment suppliers are involved while there're above 1000 kinds of maritime products which may present various types of hazardous

material that should be calculated/estimated and recorded. In order to facility implementation in a smooth way, a software for development of the Inventory (Demo version) which is in line with the requirements of Hong Kong Convention and the Guidelines has been developed by this Society. This software provides a uniform and simplified means for the stakeholders to record MD/SDoC data and produce the Inventory accordingly. It will be released in due time.

Section Four. Others

In order to ensure effective implementation of the Hong Kong Convention, IMO is developing the other five guidelines: guidelines for survey and certification; guidelines for inspection of ships; guidelines for the authorization of Ship Recycling Facilities; guidelines for safe and environmentally sound ship recycling; guidelines for the development of the Ship Recycling Plan. This Society will release the relevant documents duly based on the latest IMO working progress.

In addition, on the International Conference on the Safe and Environmentally Sound Recycling of Ships (Hong Kong), it's noted that the Resolution 5, namely "Early implementation of the technical standards of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009", was also adopted. This resolution urges Member States of IMO to consider applying the technical standards contained in the Annex to the Hong Kong Convention on a voluntary basis either to ships entitled to fly their flag, or to Ship Recycling Facility(ies) under their jurisdiction, as soon as operationally feasible, as well as invites the industry to co-operate with Member States of IMO on this matter. As the demand of environment protection for the international community is increased sharply, it's possible for some areas or countries to implement these technical standards in advance, this Society strongly recommends the relevant stakeholders to familiar with these requirements, establish the required system, and prepare as early as possible.

The condition for entry into force of the Hong Kong Convention have not been met to date, however, as the retrospective requirements contained in the Hong Kong Convention implicitly, it's recommended that the manufacturers establish relevant quality system and consider how to develop the required documents, e.g., MD and SDoC after this notice is circulated. After the Hong Kong Convention enters into force, this Society will, upon authorized by Flag state administration, require the

manufacturers to submit MD and SDoC for verification when approval and/or inspection are conducted.

It's noted also that, according to Directive 2002/95/EC (As amended by Directive 2008/385/EC), "On Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment（RoHS）", from 1 July 2006 onwards new electrical and electronic equipment put on the market in the European Union shall not contain Lead(Pb), Mercury(Hg), Cadmium(Cd), hexavalent chromium(Cr6+), polybrominated biphenyls(PBB) or polybrominated diphenyl ethers (PBDE) unless the concentration is lower than the stipulated limit.

The limits are stipulated by European Technical Development Committee (TAC), that the maximum limit is 0.01% (according to 'Cadmium Directive' 91/338/EEC）for Cadmium(Cd);, and 0.1% for others.

Ships sailing in EU waters should pay attention to the aforementioned regulations. For details, please refer to Notice of Flag State on special requirements or relevant Circular issued by this Society.

Please feel free to contact Technical Management Department of CCS for any inquiry. E-mail: rt@ccs.org.cn

This Circular is available on www.ccs.org.cn and forwarded by each branch to relevant shipbuilders, ship recycling facility(ies), ship repairers, equipment suppliers, product manufacturers, shipowners and ship management companies within its business area.

Annex 1: “Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009”（Chinese/English version）
Annex 2: MEPC.179(59) “Guidelines for the Development of the Inventory of Hazardous Materials”（Chinese/English version）

INTERNATIONAL MARITIME ORGANIZATION

IMO

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INTERNATIONAL CONFERENCE ON THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS
Agenda item 8

SR/CONF/45
19 May 2009
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ADOPTION OF THE FINAL ACT AND ANY INSTRUMENTS, RECOMMENDATIONS AND RESOLUTIONS RESULTING FROM THE WORK OF THE CONFERENCE

HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009

Text adopted by the Conference

1 As a result of its deliberations, as recorded in the Record of Decisions of the Plenary (SR/CONF/RD/2) and the Final Act of the Conference (SR/CONF/46), the Conference adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009.

2 The above-mentioned Convention, as adopted by the Conference, is annexed hereto.

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ANNEX

HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009

THE PARTIES TO THIS CONVENTION,

NOTING the growing concerns about safety, health, the environment and welfare matters in the ship recycling industry,

RECOGNIZING that recycling of ships contributes to sustainable development and, as such, is the best option for ships that have reached the end of their operating life,

RECALLING resolution A.962(23), adopted by the Assembly of the International Maritime Organization (Guidelines on Ship Recycling); amendments to the Guidelines adopted by resolution A.980(24); Decision VI/24 of the Sixth Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which adopted Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships; and the Guidelines approved by the 289th session of the Governing Body of the International Labour Office (Safety and Health in Shipbreaking: Guidelines for Asian countries and Turkey),

RECALLING ALSO resolution A.981(24), by which the Assembly of the International Maritime Organization requested the Organization's Marine Environment Protection Committee to develop a legally-binding instrument on ship recycling,

NOTING ALSO the role of the International Labour Organization in protecting the occupational safety and health of workers involved in ship recycling,

NOTING FURTHER the role of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in protecting human health and the environment against the adverse effects which may result from such wastes,

MINDFUL of the precautionary approach set out in Principle 15 of the Rio Declaration on Environment and Development and referred to in resolution MEPC.67(37), adopted by the Organization's Marine Environment Protection Committee on 15 September 1995,

MINDFUL ALSO of the need to promote the substitution of hazardous materials in the construction and maintenance of ships by less hazardous, or preferably, non-hazardous materials, without compromising the ships' safety, the safety and health of seafarers and the ships' operational efficiency,

RESOLVED to effectively address, in a legally-binding instrument, the environmental, occupational health and safety risks related to ship recycling, taking into account the particular characteristics of maritime transport and the need to secure the smooth withdrawal of ships that have reached the end of their operating lives,

CONSIDERING that these objectives may best be achieved by the conclusion of an International Convention for the Safe and Environmentally Sound Recycling of Ships,

HAVE AGREED as follows:

ARTICLE 1
General obligations

1 Each Party to this Convention undertakes to give full and complete effect to its provisions in order to prevent, reduce, minimize and, to the extent practicable, eliminate accidents, injuries and other adverse effects on human health and the environment caused by Ship Recycling, and enhance ship safety, protection of human health and the environment throughout a ship's operating life.

2 No provision of this Convention shall be interpreted as preventing a Party from taking, individually or jointly, more stringent measures consistent with international law, with respect to the safe and environmentally sound recycling of ships, in order to prevent, reduce or minimize any adverse effects on human health and the environment.

3 Parties shall endeavour to co-operate for the purpose of effective implementation of, compliance with and enforcement of this Convention.

4 The Parties undertake to encourage the continued development of technologies and practices which contribute to safe and environmentally sound Ship Recycling.

5 The Annex to this Convention forms an integral part of it. Unless expressly provided for otherwise, a reference to this Convention constitutes at the same time a reference to its Annex.

ARTICLE 2
Definitions

For the purposes of this Convention, unless expressly provided otherwise:

1 "Convention" means the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009.

2 "Administration" means the Government of the State whose flag the ship is entitled to fly, or under whose authority it is operating.

3 "Competent Authority(ies)" means a governmental authority or authorities designated by a Party as responsible, within specified geographical area(s) or area(s) of expertise, for duties related to Ship Recycling Facilities operating within the jurisdiction of that Party as specified in this Convention.

4 "Organization" means the International Maritime Organization.

5 "Secretary-General" means the Secretary-General of the Organization.

6 "Committee" means the Marine Environment Protection Committee of the Organization.

7 "Ship" means a vessel of any type whatsoever operating or having operated in the marine environment and includes submersibles, floating craft, floating platforms, self elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), including a vessel stripped of equipment or being towed.

8 "Gross tonnage" means the gross tonnage (GT) calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurement of Ships, 1969, or any successor convention.

9 "Hazardous Material" means any material or substance which is liable to create hazards to human health and/or the environment.

10 "Ship Recycling" means the activity of complete or partial dismantling of a ship at a Ship Recycling Facility in order to recover components and materials for reprocessing and re-use, whilst taking care of hazardous and other materials, and includes associated operations such as storage and treatment of components and materials on site, but not their further processing or disposal in separate facilities.

11 "Ship Recycling Facility" means a defined area that is a site, yard or facility used for the recycling of ships.

12 "Recycling Company" means the owner of the Ship Recycling Facility or any other organization or person who has assumed the responsibility for operation of the Ship Recycling activity from the owner of the Ship Recycling Facility and who on assuming such responsibility has agreed to take over all duties and responsibilities imposed by this Convention.

ARTICLE 3
Application

1 Unless expressly provided otherwise in this Convention, this Convention shall apply to:

.1 ships entitled to fly the flag of a Party or operating under its authority;

.2 Ship Recycling Facilities operating under the jurisdiction of a Party.

2 This Convention shall not apply to any warships, naval auxiliary, or other ships owned or operated by a Party and used, for the time being, only on government non-commercial service. However, each Party shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent with this Convention, so far as is reasonable and practicable.

3 This Convention shall not apply to ships of less than 500 GT or to ships operating throughout their life only in waters subject to the sovereignty or jurisdiction of the State whose flag the ship is entitled to fly. However, each Party shall ensure, by the adoption of appropriate measures, that such ships act in a manner consistent with this Convention, so far as is reasonable and practicable.

4 With respect to ships entitled to fly the flag of non-Parties to this Convention, Parties shall apply the requirements of this Convention as may be necessary to ensure that no more favourable treatment is given to such ships.

ARTICLE 4
Controls related to Ship Recycling

1 Each Party shall require that ships entitled to fly its flag or operating under its authority comply with the requirements set forth in this Convention and shall take effective measures to ensure such compliance.

2 Each Party shall require that Ship Recycling Facilities under its jurisdiction comply with the requirements set forth in this Convention and shall take effective measures to ensure such compliance.

ARTICLE 5
Survey and certification of ships

Each Party shall ensure that ships flying its flag or operating under its authority and subject to survey and certification are surveyed and certified in accordance with the regulations in the Annex.

ARTICLE 6
Authorization of Ship Recycling Facilities

Each Party shall ensure that Ship Recycling Facilities that operate under its jurisdiction and that recycle ships to which this Convention applies, or ships treated similarly pursuant to Article 3.4 of this Convention, are authorized in accordance with the regulations in the Annex.

ARTICLE 7
Exchange of information

For the Ship Recycling Facilities authorized by a Party, such Party shall provide to the Organization, if requested, and to those Parties which request it, relevant information, in regard to this Convention, on which its decision for authorization was based. The information shall be exchanged in a swift and timely manner.

ARTICLE 8
Inspection of ships

1 A ship to which this Convention applies may, in any port or offshore terminal of another Party, be subject to inspection by officers duly authorized by that Party for the purpose of determining whether the ship is in compliance with this Convention. Except as provided in paragraph 2, any such inspection is limited to verifying that there is on board either an International Certificate on Inventory of Hazardous Materials or an International Ready for Recycling Certificate, which, if valid, shall be accepted.

2 Where a ship does not carry a valid certificate or there are clear grounds for believing that:

.1 the condition of the ship or its equipment does not correspond substantially with the particulars of the certificate, and/or Part I of the Inventory of Hazardous Materials; or

.2 there is no procedure implemented on board the ship for the maintenance of Part I of the Inventory of Hazardous Materials;

a detailed inspection may be carried out taking into account guidelines developed by the Organization.

ARTICLE 9
Detection of violations

1 Parties shall co-operate in the detection of violations and the enforcement of the provisions of this Convention.

2 When there is sufficient evidence that a ship is operating, has operated or is about to operate in violation of any provision in this Convention, a Party holding the evidence may request an investigation of this ship when it enters the ports or offshore terminals under the jurisdiction of another Party. The report of such an investigation shall be sent to the Party requesting it, to the Administration of the ship concerned and to the Organization, so that action may be taken as appropriate.

3 If the ship is detected to be in violation of this Convention, the Party carrying out the inspection may take steps to warn, detain, dismiss, or exclude the ship from its ports. A Party taking such action shall immediately inform the Administration of the ship concerned and the Organization.

4 If a request for an investigation is received from any Party, together with sufficient evidence that a Ship Recycling Facility is operating, has operated or is about to operate in violation of any provision of this Convention, a Party should investigate this Ship Recycling Facility operating under its jurisdiction and make a report. The report of any such investigation shall be sent to the Party requesting it, including information on action taken or to be taken, if any, and to the Organization for appropriate action.

ARTICLE 10
Violations

1 Any violation of the requirements of this Convention shall be prohibited by national laws and:

.1 in the case of a ship, sanctions shall be established under the law of the Administration, wherever the violation occurs. If the Administration is informed of such a violation by a Party, it shall investigate the matter and may request the reporting Party to furnish additional evidence of the alleged violation. If the

Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its law. The Administration shall promptly inform the Party that reported the alleged violation, as well as the Organization, of any action taken. If the Administration has not taken any action within one year after receiving the information, it shall inform the Party which reported the alleged violation, and the Organization, of the reasons why no action has been taken;

.2 in the case of a Ship Recycling Facility, sanctions shall be established under the law of the Party having jurisdiction over the Ship Recycling Facility. If the Party is informed of such a violation by another Party, it shall investigate the matter and may request the reporting Party to furnish additional evidence of the alleged violation. If the Party is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its law. The Party shall promptly inform the Party that reported the alleged violation, as well as the Organization, of any action taken. If the Party has not taken any action within one year after receiving the information, it shall inform the Party which reported the alleged violation, and the Organization, of the reasons why no action has been taken.

2 Any violation of the requirements of this Convention within the jurisdiction of any Party shall be prohibited and sanctions shall be established under the law of that Party. Whenever such a violation occurs, that Party shall either:

.1 cause proceedings to be taken in accordance with its law; or

.2 furnish to the Administration of the ship such information and evidence as may be in its possession that a violation has occurred.

3 The sanctions provided for by the laws of a Party pursuant to this Article shall be adequate in severity to discourage violations of this Convention wherever they occur.

ARTICLE 11
Undue delay or detention of ships

1 All possible efforts shall be made to avoid a ship being unduly detained or delayed under Article 8, 9 or 10 of this Convention.

2 When a ship is unduly detained or delayed under Article 8, 9 or 10 of this Convention, it shall be entitled to compensation for any loss or damage suffered.

ARTICLE 12
Communication of information

Each Party shall report to the Organization and the Organization shall disseminate, as appropriate, the following information:

.1 a list of Ship Recycling Facilities authorized in accordance with this Convention and operating under the jurisdiction of that Party;

.2 contact details for the Competent Authority(ies), including a single contact point, for that Party;

.3 a list of the recognized organizations and nominated surveyors which are authorized to act on behalf of that Party in the administration of matters relating to the control of Ship Recycling in accordance with this Convention, and the specific responsibilities and conditions of the authority delegated to the recognized organizations or nominated surveyors;

.4 an annual list of ships flying the flag of that Party to which an International Ready for Recycling Certificate has been issued, including the name of the Recycling Company and location of the Ship Recycling Facility as shown on the certificate;

.5 an annual list of ships recycled within the jurisdiction of that Party;

.6 information concerning violations of this Convention; and

.7 actions taken towards ships and Ship Recycling Facilities under the jurisdiction of that Party.

ARTICLE 13
Technical assistance and co-operation

1 Parties undertake, directly or through the Organization and other international bodies, as appropriate, in respect of the safe and environmentally sound recycling of ships, to provide support for those Parties which request technical assistance:

.1 to train personnel;

.2 to ensure the availability of relevant technology, equipment and facilities;

.3 to initiate joint research and development programmes; and

.4 to undertake other actions aimed at the effective implementation of this Convention and of guidelines developed by the Organization related thereto.

2 Parties undertake to co-operate actively, subject to their national laws, regulations and policies, in the transfer of management systems and technology in respect of the safe and environmentally sound recycling of ships.

ARTICLE 14
Dispute settlement

Parties shall settle any dispute between them concerning the interpretation or application of this Convention by negotiation or any other peaceful means agreed upon by them, which may include enquiry, mediation, conciliation, arbitration, judicial settlement, or resort to regional agencies or arrangements.

ARTICLE 15
Relationship with international law and other international agreements

1 Nothing in this Convention shall prejudice the rights and obligations of any State under the United Nations Convention on the Law of the Sea, 1982, and under the customary international law of the sea.

2 Nothing in this Convention shall prejudice the rights and obligations of Parties under other relevant and applicable international agreements.

ARTICLE 16
Signature, ratification, acceptance, approval and accession

1 This Convention shall be open for signature by any State at the Headquarters of the Organization from 1 September 2009 to 31 August 2010 and shall thereafter remain open for accession by any State.

2 States may become Parties to this Convention by:

.1 signature not subject to ratification, acceptance, or approval; or

.2 signature subject to ratification, acceptance, or approval, followed by ratification, acceptance or approval; or

.3 accession.

3 Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument to that effect with the Secretary-General.

4 If a State comprises two or more territorial units in which different systems of law are applicable in relation to matters dealt with in this Convention, it may at the time of signature, ratification, acceptance, approval, or accession declare that this Convention shall extend to all its territorial units or only to one or more of them and may modify this declaration by submitting another declaration at any time.

5 A declaration under paragraph 4 shall be notified to the Secretary-General in writing and shall state expressly the territorial unit or units to which this Convention applies.

6 A State at the time it expresses its consent to be bound by this Convention shall declare whether it requires explicit or tacit approval of the Ship Recycling Plan before a ship may be recycled in its authorized Ship Recycling Facility(ies). This declaration may be revised thereafter by notification to the Secretary-General. Such revision shall specify the effective date of the revision.

ARTICLE 17
Entry into force

1 This Convention shall enter into force 24 months after the date on which the following conditions are met:

.1 not less than 15 States have either signed it without reservation as to ratification, acceptance or approval, or have deposited the requisite instrument of ratification, acceptance, approval or accession in accordance with Article 16;

.2 the combined merchant fleets of the States mentioned in paragraph 1.1 constitute not less than 40 per cent of the gross tonnage of the world's merchant shipping; and

.3 the combined maximum annual ship recycling volume of the States mentioned in paragraph 1.1 during the preceding 10 years constitutes not less than 3 per cent of the gross tonnage of the combined merchant shipping of the same States.

2 For States which have deposited an instrument of ratification, acceptance, approval or accession in respect of this Convention after the requirements for entry into force thereof have been met, but prior to the date of entry into force, the ratification, acceptance, approval or accession shall take effect on the date of entry into force of this Convention, or three months after the date of deposit of the instrument, whichever is the later date.

3 Any instrument of ratification, acceptance, approval or accession deposited after the date on which this Convention enters into force shall take effect three months after the date of deposit.

4 After the date on which an amendment to this Convention is deemed to have been accepted under Article 18, any instrument of ratification, acceptance, approval or accession deposited shall apply to the Convention, as amended.

ARTICLE 18
Amendments

1 This Convention may be amended by either of the procedures specified in the following paragraphs.

2 Amendments after consideration within the Organization:

.1 Any Party may propose an amendment to this Convention. A proposed amendment shall be submitted to the Secretary-General, who shall then circulate it

to the Parties and Members of the Organization at least six months prior to its consideration.

.2 An amendment proposed and circulated as above shall be referred to the Committee for consideration. Parties, whether or not Members of the Organization, shall be entitled to participate in the proceedings of the Committee for consideration and adoption of the amendment.

.3 Amendments shall be adopted by a two-thirds majority of the Parties present and voting in the Committee, on condition that at least one-third of the Parties shall be present at the time of voting.

.4 Amendments adopted in accordance with subparagraph 3 shall be communicated by the Secretary-General to the Parties for acceptance.

.5 An amendment shall be deemed to have been accepted in the following circumstances:

.5.1 An amendment to an article of this Convention shall be deemed to have been accepted on the date on which two-thirds of the Parties have notified the Secretary-General of their acceptance of it.

.5.2 An amendment to the Annex shall be deemed to have been accepted at the end of a period to be determined by the Committee at the time of its adoption, which period shall not be less than ten months after the date of adoption. However, if by that date more than one-third of the Parties notify the Secretary-General that they object to the amendment, it shall be deemed not to have been accepted.

.6 An amendment shall enter into force under the following conditions:

.6.1 An amendment to an article of this Convention shall enter into force, for those Parties that have declared that they have accepted it, six months after the date on which it is deemed to have been accepted in accordance with subparagraph .5.1.

.6.2 An amendment to the Annex shall enter into force with respect to all Parties six months after the date on which it is deemed to have been accepted, except for any Party that has:

.6.2.1 notified its objection to the amendment in accordance with subparagraph .5.2 and that has not withdrawn such objection; or

.6.2.2 notified the Secretary-General, prior to the entry into force of such amendment, that the amendment shall enter into force for it only after a subsequent notification of its acceptance.

.6.3 A Party that has notified an objection under subparagraph .6.2.1 may subsequently notify the Secretary-General that it accepts the amendment. Such amendment shall enter into force for such Party six months after the

date of its notification of acceptance, or the date on which the amendment enters into force, whichever is the later date.

.6.4 If a Party that has made a notification referred to in subparagraph .6.2.2 notifies the Secretary-General of its acceptance with respect to an amendment, such amendment shall enter into force for such Party six months after the date of its notification of acceptance, or the date on which the amendment enters into force, whichever is the later date.

3 Amendment by a Conference:

.1 Upon the request of a Party concurred in by at least one-third of the Parties, the Organization shall convene a Conference of Parties to consider amendments to this Convention.

.2 An amendment adopted by such a Conference by a two-thirds majority of the Parties present and voting shall be communicated by the Secretary-General to all Parties for acceptance.

.3 Unless the Conference decides otherwise, the amendment shall be deemed to have been accepted and shall enter into force in accordance with the procedures specified in paragraphs 2.5 and 2.6 respectively.

4 Any Party that has declined to accept an amendment to the Annex shall be treated as a non-Party only for the purpose of application of that amendment.

5 Any notification under this Article shall be made in writing to the Secretary-General.

6 The Secretary-General shall inform the Parties and Members of the Organization of:

.1 any amendment that enters into force and the date of its entry into force generally and for each Party; and

.2 any notification made under this Article.

ARTICLE 19
Denunciation

1 This Convention may be denounced by any Party at any time after the expiry of two years from the date on which this Convention enters into force for that Party.

2 Denunciation shall be effected by written notification to the Secretary-General, to take effect one year after receipt or such longer period as may be specified in that notification.

ARTICLE 20
Depositary

1 This Convention shall be deposited with the Secretary-General, who shall transmit certified copies of this Convention to all States which have signed this Convention or acceded thereto.

2 In addition to the functions specified elsewhere in this Convention, the Secretary-General shall:

.1 inform all States that have signed this Convention, or acceded thereto, of:

.1.1 each new signature or deposit of an instrument of ratification, acceptance, approval or accession, together with the date thereof;

.1.2 the date of entry into force of this Convention;

.1.3 the deposit of any instrument of denunciation from this Convention, together with the date on which it was received and the date on which the denunciation takes effect; and

.1.4 other declarations and notifications received pursuant to this Convention; and

.2 as soon as this Convention enters into force, transmit the text thereof to the Secretariat of the United Nations, for registration and publication in accordance with Article 102 of the Charter of the United Nations.

ARTICLE 21
Languages

This Convention is established in a single original in the Arabic, Chinese, English, French, Russian and Spanish languages, each text being equally authentic.

DONE AT HONG KONG, CHINA, this fifteenth day of May, two thousand and nine.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments for that purpose, have signed this Convention.

* * *

ANNEX

REGULATIONS FOR SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS

CHAPTER 1 – GENERAL PROVISIONS

Regulation 1 – Definitions

For the purposes of this Annex:

1 "Competent person" means a person with suitable qualifications, training, and sufficient knowledge, experience and skill, for the performance of the specific work. Specifically, a Competent person may be a trained worker or a managerial employee capable of recognizing and evaluating occupational hazards, risks, and employee exposure to potentially Hazardous Materials or unsafe conditions in a Ship Recycling Facility, and who is capable of specifying the necessary protection and precautions to be taken to eliminate or reduce those hazards, risks, or exposures. The Competent Authority may define appropriate criteria for the designation of such persons and may determine the duties to be assigned to them.

2 "Employer" means a natural or legal person that employs one or more workers engaged in Ship Recycling.

3 "Existing ship" means a ship which is not a new ship.

4 "New ship" means a ship:

.1 for which the building contract is placed on or after the entry into force of this Convention; or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after six months after the entry into force of this Convention; or

.3 the delivery of which is on or after 30 months after the entry into force of this Convention.

5 "New installation" means the installation of systems, equipment, insulation, or other material on a ship after the date on which this Convention enters into force.

6 "Safe-for-entry" means a space that meets the following criteria:

.1 the oxygen content of the atmosphere and the concentration of flammable vapours are within safe limits;

.2 any toxic materials in the atmosphere are within permissible concentrations; and

.3 any residues or materials associated with the work authorized by the Competent person will not produce uncontrolled release of toxic materials or an unsafe concentration of flammable vapours under existing atmospheric conditions while maintained as directed.

7 Safe-for-hot work means a space that meets the following criteria:

.1 a safe, non-explosive condition, including gas-free status, exists for the use of electric arc or gas welding equipment, cutting or burning equipment or other forms of naked flame, as well as heating, grinding, or spark generating operations;

.2 Safe-for-entry requirements of regulation 1.6 are met;

.3 existing atmospheric conditions will not change as a result of the hot work; and

.4 all adjacent spaces have been cleaned, or inerted, or treated sufficiently to prevent the start or spread of fire.

8 "Shipowner" means the person or persons or company registered as the owner of the ship or, in the absence of registration, the person or persons or company owning the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship. However, in the case of a ship owned by a State and operated by a company which in that State is registered as the ship's operator, "owner" shall mean such company. This term also includes those who have ownership of the ship for a limited period pending its sale or handing over to a Ship Recycling Facility.

9 "Site inspection" means an inspection of the Ship Recycling Facility confirming the condition described by the verified documentation.

10 "Statement of Completion" means a confirmatory statement issued by the Ship Recycling Facility that the Ship Recycling has been completed in accordance with this Convention.

11 "Tanker" means an oil tanker as defined in MARPOL Annex I or an NLS tanker as defined in MARPOL Annex II.

12 "Worker" means any person who performs work, either regularly or temporarily, in the context of an employment relationship including contractor personnel.

Regulation 2 – General applicability

Unless expressly provided otherwise, the design, construction, survey, certification, operation and recycling of ships shall be conducted in accordance with the provisions of this Annex.

Regulation 3 – Relationship with other standards, recommendations and guidance

Parties shall take measures to implement the requirements of the regulations of this Annex, taking into account relevant and applicable standards, recommendations and guidance developed by the International Labour Organization and the relevant and applicable technical standards, recommendations and guidance developed under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

CHAPTER 2 – REQUIREMENTS FOR SHIPS

Part A – Design, construction, operation and maintenance of ships

Regulation 4 – Controls of ships' Hazardous Materials

In accordance with the requirements specified in Appendix 1 to this Convention each Party:

.1 shall prohibit and/or restrict the installation or use of Hazardous Materials listed in Appendix 1 on ships entitled to fly its flag or operating under its authority; and

.2 shall prohibit and/or restrict the installation or use of such materials on ships, whilst in its ports, shipyards, ship repair yards, or offshore terminals,

and shall take effective measures to ensure that such ships comply with those requirements.

Regulation 5 – Inventory of Hazardous Materials

1 Each new ship shall have on board an Inventory of Hazardous Materials. The Inventory shall be verified either by the Administration or by any person or organization authorized by it taking into account guidelines, including any threshold values and exemptions contained in those guidelines, developed by the Organization. The Inventory of Hazardous Materials shall be specific to each ship and shall at least:

.1 identify as Part I, Hazardous Materials listed in Appendices 1 and 2 to this Convention and contained in ship's structure or equipment, their location and approximate quantities; and

.2 clarify that the ship complies with regulation 4.

2 Existing ships shall comply as far as practicable with paragraph 1 not later than 5 years after the entry into force of this Convention, or before going for recycling if this is earlier, taking into account the guidelines developed by the Organization and the Organization's Harmonized System of Survey and Certification. The Hazardous Materials listed in Appendix 1, at least, shall be identified when the Inventory is developed. For existing ships a plan shall be prepared describing the visual/sampling check by which the Inventory of Hazardous Materials is developed, taking into account the guidelines developed by the Organization.

3 Part I of the Inventory of Hazardous Materials shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing Hazardous Materials listed in Appendix 2 and relevant changes in ship structure and equipment, taking into account the guidelines developed by the Organization.

4 Prior to recycling the Inventory shall, in addition to the properly maintained and updated Part I, incorporate Part II for operationally generated wastes and Part III for stores, and be verified either by the Administration or by any person or organization authorized by it, taking into account the guidelines developed by the Organization.

Regulation 6 – Procedure for proposing amendments to Appendices 1 and 2

1 Any Party may propose an amendment to Appendix 1 and/or Appendix 2 in accordance with this regulation. The proposed amendment shall be considered within the Organization under Article 18 paragraph 2 and this regulation.

2 When the Organization receives a proposal, it shall also bring the proposal to the attention of the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization and non-governmental organizations in consultative status with the Organization and shall make it available to them.

3 The Committee shall establish a technical group in accordance with regulation 7 to review proposals submitted in accordance with paragraph 1 of this regulation.

4 The technical group shall review the proposal along with any additional data, including decisions adopted by other international bodies regarding their lists of materials or hazardous substances, submitted by any interested entity, and shall evaluate and report to the Committee whether the Hazardous Material in question is likely, in the context of this Convention, to lead to significant adverse effects on human health or the environment such that the amendment of Appendix 1 or Appendix 2 is warranted. In this regard:

.1 The technical group's review shall include:

.1.1 an evaluation of the association between the Hazardous Material in question and the likelihood, in the context of this Convention, that it will lead to significant adverse effects on human health or the environment based on the submitted data or other relevant data brought to the attention of the group;

.1.2 an evaluation of the potential risk reduction attributable to the proposed control measures and any other control measures that may be considered by the technical group;

.1.3 consideration of available information on the technical feasibility of control measures;

.1.4 consideration of available information on other effects arising from the introduction of such control measures relating to:

- the environment;

- human health and safety including that of seafarers and workers; and

- the cost to international shipping and other relevant sectors.

.1.5 consideration of the availability of suitable alternatives to the Hazardous Material to be controlled, including a consideration of the potential risks of alternatives;

.1.6 consideration of the risks posed by the Hazardous Material during the recycling process; and

.1.7 consideration of suitable threshold values and any useful or necessary exemptions.

.2 If the technical group finds that the Hazardous Material in question is likely, in the context of this Convention, to lead to significant adverse effects on human health or the environment, lack of full scientific certainty shall not be used as a reason to prevent the group from proceeding with an evaluation of the proposal.

.3 The technical group's report shall be in writing and shall take into account each of the evaluations and considerations referred to in subparagraph .1, except that the technical group may decide not to proceed with the evaluations and considerations described in subparagraphs .1.2 to .1.7 if it determines after the evaluation in subparagraph .1.1 that the proposal does not warrant further consideration.

.4 The technical group's report shall include, *inter alia*, a recommendation on whether international controls pursuant to this Convention are warranted on the Hazardous Material in question, on the suitability of the specific control measures suggested in the comprehensive proposal, or on other control measures which it believes to be more suitable.

5 The Committee shall decide whether to approve any proposal to amend Appendix 1 or Appendix 2, and any modifications thereto, if appropriate, taking into account the technical group's report. Any proposed amendment shall specify the application of the amendment for ships certified in accordance with this Convention before the entry into force of the amendment. If the report finds that the Hazardous Material in question is likely, in the context of this Convention, to lead to significant adverse effects on human health or the environment, lack of full scientific certainty shall not be used as a reason to prevent a decision from being taken to list a Hazardous Material in Appendix 1 or Appendix 2. A decision not to approve the proposal shall not preclude future submission of a new proposal with respect to a particular Hazardous Material if new information comes to light.

Regulation 7 – Technical Groups

1 The Committee may establish one or more technical groups pursuant to regulation 6 as needed. The technical group may comprise representatives of the Parties, Members of the Organization, the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization, and non-governmental organizations in consultative status with the Organization, which should preferably include representatives of institutions and laboratories with expertise in environmental fate and effects of substances, toxicological effects, marine biology, human health, economic analysis, risk management, shipbuilding, international shipping, occupational health and safety or other fields of expertise necessary to objectively review the technical merits of a proposal.

2 The Committee shall decide on the terms of reference, organization, participation and operation of the technical groups. Such terms shall provide for protection of any confidential information that may be submitted. Technical groups may hold such meetings as required, but shall endeavour to conduct their work through written or electronic correspondence or other media as appropriate.

3 Only the representatives of Parties may participate in formulating any recommendation to the Committee pursuant to regulation 6. A technical group shall endeavour to achieve unanimity among the representatives of the Parties. If unanimity is not possible, the technical group shall communicate any minority views of such representatives.

Part B – Preparation for Ship Recycling

Regulation 8 – General requirements

Ships destined to be recycled shall:

.1 only be recycled at Ship Recycling Facilities that are:

.1 authorized in accordance with this Convention; and

.2 fully authorized to undertake all the ship recycling which the Ship Recycling Plan specifies to be conducted by the identified Ship Recycling Facility(ies);

.2 conduct operations in the period prior to entering the Ship Recycling Facility in order to minimize the amount of cargo residues, remaining fuel oil, and wastes remaining on board;

.3 in the case of a tanker, 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, according to national laws, regulations and policies of the Party under whose jurisdiction the Ship Recycling Facility operates;

.4 provide to the Ship Recycling Facility all available information relating to the ship for the development of the Ship Recycling Plan required by regulation 9;

.5 complete the Inventory required by regulation 5; and

.6 be certified as ready for recycling by the Administration or organization recognized by it, prior to any recycling activity taking place.

Regulation 9 – Ship Recycling Plan

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. The Ship Recycling Plan shall:

.1 be developed taking into account information provided by the shipowner;

.2 be developed in the language accepted by the Party authorizing the Ship Recycling Facility, and if the language used is not English, French or Spanish, the Ship Recycling Plan shall be translated into one of these languages, except where the Administration is satisfied that this is not necessary;

.3 include information concerning *inter alia*, the establishment, maintenance, and monitoring of Safe-for-entry and Safe-for-hot work conditions and how the type and amount of materials including those identified in the Inventory of Hazardous Materials will be managed;

.4 in accordance with the declaration deposited pursuant to Article 16.6, be either explicitly or tacitly approved by the Competent Authority authorizing the Ship Recycling Facility. The Competent Authority shall send written acknowledgement of receipt of the Ship Recycling Plan to the Ship Recycling Facility, Ship Owner and Administration within three (3) working days of its receipt in accordance with regulation 24. Thereafter:

.1 where a Party requires explicit approval of the Ship Recycling Plan, the Competent Authority shall send written notification of its decision to approve or deny the Ship Recycling Plan to the Ship Recycling Facility, Ship Owner and Administration; and

.2 where a Party requires tacit approval of the Ship Recycling Plan, the acknowledgment of receipt shall specify the end date of a 14-day review period. The Competent Authority shall notify any written objection to the Ship Recycling Plan to the Ship Recycling Facility, Ship Owner and Administration within this 14-day review period. Where no such written objection has been notified, the Ship Recycling Plan shall be deemed to be approved.

.5 once approved in accordance with paragraph .4, be made available for inspection by the Administration, or any nominated surveyors or organization recognized by it; and

.6 where more than one Ship Recycling Facility is used, identify the Ship Recycling Facilities to be used and specify the recycling activities and the order in which they occur at each authorized Ship Recycling Facility.

Part C – Surveys and certification

Regulation 10 – Surveys

1 Ships to which this Convention applies shall be subject to the surveys specified below:

.1 an initial survey before the ship is put in service, or before the International Certificate on Inventory of Hazardous Materials is issued. This survey shall verify that Part I of the Inventory required by regulation 5 is in accordance with the requirements of this Convention;

.2 a renewal survey at intervals specified by the Administration, but not exceeding five years. This survey shall verify that Part I of the Inventory of Hazardous Materials required by regulation 5 complies with the requirements of this Convention;

.3 an additional survey, either general or partial, according to the circumstances, may be made at the request of the shipowner after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material. The survey shall be such as to ensure that any such change, replacement, or significant repair has been made in the way that the ship continues to comply with the requirements of this Convention, and that Part I of the Inventory is amended as necessary; and

.4 a final survey prior to the ship being taken out of service and before the recycling of the ship has started. This survey shall verify:

.1 that the Inventory of Hazardous Materials as required by regulation 5.4 is in accordance with the requirements of this Convention taking into account the guidelines developed by the Organization;

.2 that the Ship Recycling Plan, as required by regulation 9, properly reflects the information contained in the Inventory of Hazardous Materials as required by regulation 5.4 and contains information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot work conditions; and

.3 that the Ship Recycling Facility(ies) where the ship is to be recycled holds a valid authorization in accordance with this Convention.

2 Surveys of ships for the purpose of enforcement of the provisions of this Convention shall be carried out by officers of the Administration, taking into account the guidelines developed by the Organization. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it.

3 An Administration nominating surveyors or recognizing organizations to conduct surveys, as described in paragraph 2 shall, as a minimum, empower such nominated surveyors or recognized organizations to:

.1 require a ship that they survey to comply with the provisions of this Convention; and

.2 carry out surveys and inspections if requested by the appropriate authorities of a port State that is a Party.

4 In every case, the Administration concerned shall be responsible to ensure the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation.

5 The initial and renewal surveys should be harmonized with the surveys required by other applicable statutory instruments of the Organization.

Regulation 11 – Issuance and endorsement of certificates

1 An International Certificate on Inventory of Hazardous Materials shall be issued either by the Administration or by any person or organization authorized by it after successful completion of an initial or renewal survey conducted in accordance with regulation 10, to any ships to which regulation 10 applies, except for existing ships for which both an initial survey and a final survey are conducted at the same time, taking into account the guidelines developed by the Organization.

2 The International Certificate on Inventory of Hazardous Materials issued under paragraph 1, at the request of the shipowner, shall be endorsed either by the Administration or by any person or organization authorized by it after successful completion of an additional survey conducted in accordance with regulation 10.

3 Notwithstanding regulation 14.2 and the requirements of regulation 10.1.2, when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate.

4 When the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate.

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

6 If a certificate is issued for a period of less than five years, the Administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in regulation 10.1.2.

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

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

9 A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey

is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

10 In special circumstances, as determined by the Administration, a new certificate need not be dated from the date of expiry of the existing certificate as required by paragraph 4, 8 or 9 of this regulation. In these special circumstances, the new certificate shall be valid to a date not exceeding five years from the date of completion of the renewal survey.

11 An International Ready for Recycling Certificate shall be issued either by the Administration or by any person or organization authorized by it, after successful completion of a final survey in accordance with the provisions of regulation 10, to any ships to which regulation 10 applies, taking into account the authorization of the Ship Recycling Facility and the guidelines developed by the Organization.

12 A certificate issued under the authority of a Party shall be accepted by the other Parties and regarded for all purposes covered by this Convention as having the same validity as a certificate issued by them. Certificates shall be issued or endorsed either by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the certificate.

Regulation 12 – Issuance or endorsement of a certificate by another Party

1 At the request of the Administration, another Party may cause a ship to be surveyed and, if satisfied that the provisions of this Convention are complied with, shall issue or authorize the issuance of a certificate to the ship, and where appropriate, endorse or authorize the endorsement of that certificate on the ship, in accordance with this Annex.

2 A copy of the certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

3 A certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as a certificate issued by the Administration.

4 No certificate shall be issued to a ship entitled to fly the flag of a State which is not a Party.

Regulation 13 – Form of the certificates

The certificates shall be drawn up in an official language of the issuing Party, in the form set forth in Appendices 3 and 4. If the language used is not English, French or Spanish, the text shall include a translation into one of these languages. The Administration may, however, issue the International Certificate on Inventory of Hazardous Materials drawn up only in an official language of the issuing Party to ships not engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to this Convention and the International Ready for Recycling Certificate drawn up only in an official language of the issuing Party to ships recycled in Ship Recycling Facilities under the jurisdiction of the issuing Party.

Regulation 14 – Duration and validity of the certificates

1 An International Certificate on Inventory of Hazardous Materials issued under regulation 11 or 12 shall cease to be valid in any of the following cases:

.1 if the condition of the ship does not correspond substantially with the particulars of the certificate, including where Part I of the Inventory of Hazardous Materials is not properly maintained and updated, reflecting changes in ship structure and equipment, in accordance with the guidelines developed by the Organization;

.2 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Party issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulation 10. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificates carried by the ship before the transfer and, if available, copies of the relevant survey reports;

.3 if the renewal survey is not completed within the periods specified under regulations 10.1 and 11; or

.4 if the certificate is not endorsed in accordance with regulation 11 or 12.

2 An International Certificate on Inventory of Hazardous Materials shall be issued for a period specified by the Administration, which shall not exceed five years.

3 An International Ready for Recycling Certificate shall be issued for a period specified by the Administration that shall not exceed three months.

4 An International Ready for Recycling Certificate issued under regulation 11 or 12 shall cease to be valid if the condition of the ship does not correspond substantially with the particulars of the certificate.

5 The International Ready for Recycling Certificate may be extended by the Administration or by any person or organization authorized by it for a single point to point voyage to the Ship Recycling Facility.

CHAPTER 3 – REQUIREMENTS FOR SHIP RECYCLING FACILITIES

Regulation 15 – Controls on Ship Recycling Facilities

1 Each Party shall establish legislation, regulations, and standards that are necessary to ensure that Ship Recycling Facilities are designed, constructed, and operated in a safe and environmentally sound manner in accordance with the regulations of this Convention.

2 Each Party shall establish a mechanism for authorizing Ship Recycling Facilities with appropriate conditions to ensure that such Ship Recycling Facilities meet the requirements of this Convention.

3 Each Party shall establish a mechanism for ensuring that Ship Recycling Facilities comply with the requirements of this chapter including the establishment and effective use of inspection, monitoring and enforcement provisions, including powers of entry and sampling. Such a mechanism may include an audit scheme to be carried out by the Competent Authority(ies) or an organization recognized by the Party, taking into account guidelines developed by the Organization, and the results of these audits should be communicated to the Organization.

4 Each Party shall designate one or more Competent Authorities and the single contact point to be used by the Organization, Parties to this Convention and other interested entities, for matters related to Ship Recycling Facilities operating within the jurisdiction of that Party.

Regulation 16 – Authorization of Ship Recycling Facilities

1 Ship Recycling Facilities which recycle ships to which this Convention applies, or ships treated similarly pursuant to Article 3.4, shall be authorized by a Party taking into account the guidelines developed by the Organization.

2 The authorization shall be carried out by the Competent Authority(ies) and shall include verification of documentation required by this Convention and a site inspection. The Competent Authority(ies) may however entrust the authorization of Ship Recycling Facilities to organizations recognized by it.

3 The Party shall notify the Organization of the specific responsibilities and conditions of the authority delegated to the recognized organizations, for circulation to Parties. In every case, the Competent Authority(ies) retains full responsibility for the authorization issued.

4 The authorization shall be drawn up in the form set forth in Appendix 5. If the language used is not English, French or Spanish, the text shall include a translation into one of these languages.

5 The authorization shall be valid for a period specified by the Party but not exceeding five years. The Party shall identify the terms for which the authorization will be issued, withdrawn, suspended, amended and renewed, and communicate these terms to the Ship Recycling Facilities. If a Ship Recycling Facility refuses inspection by the Competent Authority(ies) or the recognized organization operating on its/their behalf, the authorization shall be suspended or withdrawn.

6 If incidents or actions taken at the Ship Recycling Facility have the effect that the conditions for the authorization are no longer fulfilled, the Ship Recycling Facility shall inform the Competent Authority(ies). The Competent Authority(ies) may accordingly decide to suspend or withdraw the authorization, or require corrective actions by the Ship Recycling Facility.

Regulation 17 – General requirements

1 Ship Recycling Facilities authorized by a Party shall establish management systems, procedures and techniques which do not pose health risks to the workers concerned or to the population in the vicinity of the Ship Recycling Facility and which will prevent, reduce, minimize and to the extent practicable eliminate adverse effects on the environment caused by Ship Recycling, taking into account guidelines developed by the Organization.

2 Ship Recycling Facilities authorized by a Party shall, for ships to which this Convention applies, or ships treated similarly pursuant to Article 3.4:

.1 only accept ships that:

.1 comply with this Convention; or

.2 meet the requirements of this Convention;

.2 only accept ships which they are authorized to recycle; and

.3 have the documentation of its authorization available if such documentation is requested by a shipowner that is considering recycling a ship at that Ship Recycling Facility.

Regulation 18 – Ship Recycling Facility Plan

Ship Recycling Facilities authorized by a Party shall prepare a Ship Recycling Facility Plan. The Plan shall be adopted by the board or the appropriate governing body of the Recycling Company, and shall include:

.1 a policy ensuring workers' safety and the protection of human health and the environment, including the establishment of objectives that lead to the minimization and elimination to the extent practicable of the adverse effects on human health and the environment caused by Ship Recycling;

.2 a system for ensuring implementation of the requirements set out in this Convention, the achievement of the goals set out in the policy of the Recycling Company, and the continuous improvement of the procedures and standards used in the Ship Recycling operations;

.3 identification of roles and responsibilitilies for employers and workers when conducting Ship Recycling operations;

.4 a programme for providing appropriate information and training of workers for the safe and environmentally sound operation of the Ship Recycling Facility;

.5 an emergency preparedness and response plan;

.6 a system for monitoring the performance of Ship Recycling;

.7 a record-keeping system showing how Ship Recycling is carried out;

.8 a system for reporting discharges, emissions, incidents and accidents causing damage, or with the potential of causing damage, to workers' safety, human health and the environment; and

.9 a system for reporting occupational diseases, accidents, injuries and other adverse effects on workers' safety and human health,

taking into account guidelines developed by the Organization.

Regulation 19 – Prevention of adverse effects to human health and the environment

Ship Recycling Facilities authorized by a Party shall establish and utilize procedures to:

.1 prevent explosions, fires, and other unsafe conditions by ensuring that Safe-for-hot work conditions and procedures are established, maintained and monitored throughout Ship Recycling;

.2 prevent harm from dangerous atmospheres and other unsafe conditions by ensuring that Safe-for-entry conditions and procedures are established, maintained, and monitored in ship spaces, including confined spaces and enclosed spaces, throughout Ship Recycling;

.3 prevent other accidents, occupational diseases and injuries or other adverse effects on human health and the environment; and

.4 prevent spills or emissions throughout Ship Recycling which may cause harm to human health and/or the environment,

taking into account guidelines developed by the Organization.

Regulation 20 – Safe and environmentally sound management of Hazardous Materials

1 Ship Recycling Facilities authorized by a Party shall ensure safe and environmentally sound removal of any Hazardous Material contained in a ship certified in accordance with regulation 11 or 12. The person(s) in charge of the recycling operations and the workers shall be familiar with the requirements of this Convention relevant to their tasks and, in particular, actively use the Inventory of Hazardous Materials and the Ship Recycling Plan, prior to and during the removal of Hazardous Materials.

2 Ship Recycling Facilities authorized by a Party shall ensure that all Hazardous Materials detailed in the Inventory are identified, labelled, packaged and removed to the maximum extent possible prior to cutting by properly trained and equiped workers, taking into account the guidelines developed by the Organization, in particular:

.1 hazardous liquids, residues and sediments;

.2 substances or objects containing heavy metals such as lead, mercury, cadmium and hexavalent chromium;

.3 paints and coatings that are highly flammable and/or lead to toxic releases;

.4 asbestos and materials containing asbestos;

.5 PCB and materials containing PCBs, ensuring that heat inducing equipment is avoided during such operations;

.6 CFCs and halons; and

.7 other Hazardous Materials not listed above and that are not a part of the ship structure.

3 Ship Recycling Facilities authorized by a Party shall provide for and ensure safe and environmentally sound management of all Hazardous Materials and wastes removed from the ship recycled at that Ship Recycling Facility. Waste management and disposal sites shall be identified to provide for the further safe and environmentally sound management of materials.

4 All wastes generated from the recycling activity shall be kept separate from recyclable materials and equipment, labelled, stored in appropriate conditions that do not pose a risk to the workers, human health or the environment and only transferred to a waste management facility authorized to deal with their treatment and disposal in a safe and environmentally sound manner.

Regulation 21 – Emergency preparedness and response

Ship Recycling Facilities authorized by a Party shall establish and maintain an emergency preparedness and response plan. The plan shall be made having regard to the location and environment of the Ship Recycling Facility, and shall take into account the size and nature of activities associated with each Ship Recycling operation. The plan shall furthermore:

.1 ensure that the necessary equipment and procedures to be followed in the case of an emergency are in place, and that drills are conducted on a regular basis;

.2 ensure that the necessary information, internal communication and coordination are provided to protect all people and the environment in the event of an emergency at the Ship Recycling Facility;

.3 provide for communication with, and information to, the relevant Competent Authority(ies), the neighbourhood and emergency response services;

.4 provide for first-aid and medical assistance, fire-fighting and evacuation of all people at the Ship Recycling Facility, pollution prevention; and

.5 provide for relevant information and training to all workers of the Ship Recycling Facility, at all levels and according to their competence, including regular exercises in emergency prevention, preparedness and response procedures.

Regulation 22 – Worker safety and training

1 Ship Recycling Facilities authorized by a Party shall provide for worker safety by measures including:

.1 ensuring the availability, maintenance and use of personal protective equipment and clothing needed for all Ship Recycling operations;

.2 ensuring that training programmes are provided to enable workers to safely undertake all Ship Recycling operations they are tasked to do; and

.3 ensuring that all workers at the Ship Recycling Facility have been provided with appropriate training and familiarization prior to performing any Ship Recycling operation.

2 Ship Recycling Facilities authorized by a Party shall provide and ensure the use of personal protective equipment for operations requiring such use, including:

.1 head protection;

.2 face and eye protection;

.3 hand and foot protection;

.4 respiratory protective equipment;

.5 hearing protection;

.6 protectors against radioactive contamination;

.7 protection from falls; and

.8 appropriate clothing.

3 Ship Recycling Facilities authorized by a Party may co-operate in providing for training of workers. Taking into account the guidelines developed by the Organization, the training programmes set forth in paragraph 1.2 of this regulation shall:

.1 cover all workers including contractor personnel and employees in the Ship Recycling Facility;

.2 be conducted by Competent persons;

.3 provide for initial and refresher training at appropriate intervals;

.4 include participants' evaluation of their comprehension and retention of the training;

.5 be reviewed periodically and modified as necessary; and

.6 be documented.

Regulation 23 – Reporting on incidents, accidents, occupational diseases and chronic effects

1 Ship Recycling Facilities authorized by a Party shall report to the Competent Authority(ies) any incident, accident, occupational diseases, or chronic effects causing, or with the potential of causing, risks to workers safety, human health and the environment.

2 Reports shall contain a description of the incident, accident, occupational disease, or chronic effect, its cause, the response action taken and the consequences and corrective actions to be taken.

CHAPTER 4 – REPORTING REQUIREMENTS

Regulation 24 – Initial notification and reporting requirements

1 A shipowner shall notify the Administration in due time and in writing of the intention to recycle a ship in order to enable the Administration to prepare for the survey and certification required by this Convention.

2 A Ship Recycling Facility when preparing to receive a ship for recycling shall notify in due time and in writing its Competent Authority(ies) of the intent. The notification shall include at least the following ship details:

.1 name of the State whose flag the ship is entitled to fly;

.2 date on which the ship was registered with that State;

.3 ship's identification number (IMO number);

.4 hull number on new-building delivery;

.5 name and type of the ship;

.6 port at which the ship is registered;

.7 name and address of the Shipowner as well as the IMO registered owner identification number;

.8 name and address of the company as well as the IMO company identification number;

.9 name of all classification society(ies) with which the ship is classed;

.10 ship's main particulars (Length overall (LOA), Breadth (Moulded), Depth (Moulded), Lightweight, Gross and Net tonnage, and engine type and rating);

.11 Inventory of Hazardous Materials; and

.12 draft ship recycling plan for approval pursuant to regulation 9.

3 When the ship destined to be recycled has acquired the International Ready for Recycling Certificate, the Ship Recycling Facility shall report to its Competent Authority(ies) the planned start of the Ship Recycling. The report shall be in accordance with the reporting format in Appendix 6, and shall at least include a copy of the International Ready for Recycling Certificate. Recycling of the ship shall not start prior to the submission of the report.

Regulation 25 – Reporting upon completion

When the partial or complete recycling of a ship is completed in accordance with the requirements of this Convention, a Statement of Completion shall be issued by the Ship Recycling Facility and reported to its Competent Authority(ies). This report must be compiled as

shown in appendix 7. The Competent Authority(ies) shall send a copy of the Statement to the Administration which issued the International Ready for Recycling Certificate for the ship. The Statement shall be issued within 14 days of the date of partial or completed Ship Recycling in accordance with the Ship Recycling Plan and shall include a report on incidents and accidents damaging human health and/or the environment, if any.

APPENDIX 1

CONTROLS OF HAZARDOUS MATERIALS

Hazardous Material	Definitions	Control measures
Asbestos	Materials containing asbestos	For all ships, new installation of materials which contain asbestos shall be prohibited.
Ozone-depleting substances	Ozone-depleting substances means controlled substances defined in paragraph 4 of article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A,B,C or E to the said Protocol in force at the time of application or interpretation of this Annex. Ozone-depleting substances that may be found on board ship include, but are not limited to: Halon 1211 Bromochlorodifluoromethane Halon 1301 Bromotrifluoromethane Halon 2402 1,2-Dibromo-1,1,2,2-tetrafluoroethane (also known as Halon 114B2) CFC-11 Trichlorofluoromethane CFC-12 Dichlorodifluoromethane CFC-113 1,1,2-Trichloro-1,2,2-trifluoroethane CFC-114 1,2-Dichloro-1,1,2,2-tetrafluoroethane CFC-115 Chloropentafluoroethane	New installations which contain ozone-depleting substances shall be prohibited on all ships, except that new installations containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020.
Polychlorinated biphenyls (PCB)	"Polychlorinated biphenyls" means aromatic compounds formed in such a manner that the hydrogen atoms on the biphenyl molecule (two benzene rings bonded together by a single carbon-carbon bond) may be replaced by up to ten chlorine atoms	For all ships, new installation of materials which contain Polychlorinated biphenyls shall be prohibited.
Anti-fouling compounds and systems	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) in force at the time of application or interpretation of this Annex.	1. No ship may apply anti-fouling systems containing organotin compounds as a biocide or any other anti-fouling system whose application or use is prohibited by the AFS Convention. 2. No new ships or new installations on ships shall apply or employ anti-fouling compounds or systems in a manner inconsistent with the AFS Convention.

APPENDIX 2

MINIMUM LIST OF ITEMS FOR THE INVENTORY OF HAZARDOUS MATERIALS

Any Hazardous Materials listed in Appendix 1
Cadmium and Cadmium Compounds
Hexavalent Chromium and Hexavalent Chromium Compounds
Lead and Lead Compounds
Mercury and Mercury Compounds
Polybrominated Biphenyl (PBBs)
Polybrominated Diphenyl Ethers (PBDEs)
Polychlorinated Naphthalenes (more than 3 chlorine atoms)
Radioactive Substances
Certain Shortchain Chlorinated Paraffins (Alkanes, C10-C13, chloro)

APPENDIX 3

FORM OF THE INTERNATIONAL CERTIFICATE ON INVENTORY OF HAZARDOUS MATERIALS

INTERNATIONAL CERTIFICATE ON INVENTORY OF HAZARDOUS MATERIALS

(Note: This certificate shall be supplemented by Part I of the Inventory of Hazardous Materials)

(Official seal) *(State)*

Issued under the provisions of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention") under the authority of the Government of

.....
(*Full designation of the country*)

by .....
(*Full designation of the person or organization authorized under the provisions of the Convention*)

Particulars of the Ship

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	
Date of Construction	

Particulars of Part I of the Inventory of Hazardous Materials

Part I of the Inventory of Hazardous Materials identification/verification number: .....

Note: Part I of the Inventory of Hazardous Materials, as required by regulation 5 of the Annex to the Convention, is an essential part of the International Certificate on Inventory of Hazardous Materials and must always accompany the International Certificate on Inventory of Hazardous Materials. Part I of the Inventory of Hazardous Materials should be compiled on the basis of the standard format shown in the guidelines developed by the Organization.

THIS IS TO CERTIFY:

1. that the ship has been surveyed in accordance with regulation 10 of the Annex to the Convention; and
2. that the survey shows that Part I of the Inventory of Hazardous Materials fully complies with the applicable requirements of the Convention.

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

This certificate is valid until ..... (dd/mm/yyyy)

Issued at .....
(*Place of issue of certificate*)

(dd/mm/yyyy) ....
(*Date of issue*) (*Signature of duly authorized official issuing the certificate*)

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

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN FIVE YEARS WHERE REGULATION 11.6 APPLIES*

The ship complies with the relevant provisions of the Convention, and this certificate shall, in accordance with regulation 11.6 of the Annex to the Convention, be accepted as valid until (dd/mm/yyyy): .....

Signed: .....

(Signature of duly authorized official)

Place:

Date: (dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND REGULATION 11.7 APPLIES*

The ship complies with the relevant provisions of the Convention, and this certificate shall, in accordance with regulation 11.7 of the Annex to the Convention, be accepted as valid until (dd/mm/yyyy): .....

Signed: .....

(Signature of duly authorized official)

Place: .....

Date: (dd/mm/yyyy) .....

(Seal or stamp of the authority, as appropriate)

* This page of the endorsement at survey shall be reproduced and added to the certificate as considered necessary by the Administration.

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION 11.8 OR 11.9 APPLIES*

This certificate shall, in accordance with regulation 11.8 or 11.9** of the Annex to the Convention, be accepted as valid until (dd/mm/yyyy): .....

Signed: .....

(Signature of duly authorized official)

Place: .....

Date: (dd/mm/yyyy) .....

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ADDITIONAL SURVEY*

At an additional survey in accordance with regulation 10 of the Annex to the Convention, the ship was found to comply with the relevant provisions of the Convention.

Signed: .....

(Signature of duly authorized official)

Place: .....

Date: (dd/mm/yyyy) .....

(Seal or stamp of the authority, as appropriate)

---

* This page of the endorsement at survey shall be reproduced and added to the certificate as considered necessary by the Administration.

** Delete as appropriate.

APPENDIX 4

FORM OF THE INTERNATIONAL READY FOR RECYCLING CERTIFICATE

INTERNATIONAL READY FOR RECYCLING CERTIFICATE

(Note: This certificate shall be supplemented by the Inventory of Hazardous Materials and the Ship Recycling Plan)

(Official seal) *(State)*

Issued under the provisions of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention") under the authority of the Government of

.....
(*Full designation of the country*)

by .....
(*Full designation of the person or organization authorized under the provisions of the Convention*)

Particulars of the Ship

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	
Date of Construction	

Particulars of the Ship Recycling Facility(ies)

Name of Ship Recycling Facility	
Distinctive Recycling Company identity number*	
Full address	
Date of expiry of DASR	

* This number is based on the Document of Authorization to conduct Ship Recycling (DASR).

Particulars of the Inventory of Hazardous Materials

Inventory of Hazardous Materials identification/verification number: .....

Note: The Inventory of Hazardous Materials, as required by regulation 5 of the Annex to the Convention, is an essential part of the International Ready for Recycling Certificate and must always accompany the International Ready for Recycling Certificate. The Inventory of Hazardous Materials should be compiled on the basis of the standard format shown in the guidelines developed by the Organization.

Particulars of the Ship Recycling Plan

Ship Recycling Plan identification/verification number: .....

Note: The Ship Recycling Plan, as required by regulation 9 of the Annex to the Convention, is an essential part of the International Ready for Recycling Certificate and must always accompany the International Ready for Recycling Certificate.

THIS IS TO CERTIFY:

1 that the ship has been surveyed in accordance with regulation 10 of the Annex to the Convention;

2 that the ship has a valid Inventory of Hazardous Materials in accordance with regulation 5 of the Annex to the Convention;

3 that the Ship Recycling Plan, as required by regulation 9, properly reflects the information contained in the Inventory of Hazardous Materials as required by regulation 5.4 and contains information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot work conditions; and

4 that the Ship Recycling Facility(ies) where this ship is to be recycled holds a valid authorization in accordance with the Convention.

This certificate is valid until (dd/mm/yyyy) .....
(Date)

Issued at .....
(*Place of issue of certificate*)

(dd/mm/yyyy) ....
(*Date of issue*) (*Signature of duly authorized official issuing the certificate*)

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

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF THE SHIP RECYCLING FACILITY FOR A PERIOD OF GRACE WHERE REGULATION 14.5 APPLIES*

This certificate shall, in accordance with regulation 14.5 of the Annex to the Convention, be accepted as valid for a single point to point voyage

from the port of: .....

to the port of: .....

Signed: .....

(Signature of duly authorized official)

Place: .....

Date: (dd/mm/yyyy) .....

(Seal or stamp of the authority, as appropriate)

* This page of the endorsement shall be reproduced and added to the certificate as considered necessary by the Administration.

APPENDIX 5

FORM OF THE AUTHORIZATION OF SHIP RECYCLING FACILITIES

Document of Authorization to conduct Ship Recycling (DASR) in accordance with the requirements of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009

Issued under the provision of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention") under the authority of the Government of:

……...
(Full designation of the country)

by……..
(Full designation of the Competent Authority under the Convention)

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

This is to verify that the Ship Recycling Facility has implemented management systems, procedures and techniques in accordance with Chapters 3 and 4 to the Annex to the Convention.

This authorization is valid until ……. and is subject to the limitations identified in the attached supplement.

This authorization is subject to amendment, suspension, withdrawal, or periodic renewal in accordance with regulation 16 of the Annex to the Convention.

Issued at .....
(*Place of issue of the authorization*)

(dd/mm/yyyy) ....
(*Date of issue*) (*Signature of duly authorized official issuing the authorization*)

.....
(Typed name and title of duly authorized official issuing the authorization)

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

SUPPLEMENT TO:

Document of Authorization to undertake Ship Recycling (DASR) in accordance with the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009

Notes:

1 This record shall be permanently attached to the DASR. The DASR shall be available at the Ship Recycling Facility at all times.

2 All procedures, plans and other documents produced by the Ship Recycling Facility and required under the terms to which the DASR has been issued shall be available in the working language of the Ship Recycling Facility and in either English, French or Spanish.

3 The authorization is subject to the limitations defined by this supplement.

1 GENERAL TERMS

1.1 Requirements of the Convention

The Ship Recycling Facility meets the requirements that it be designed, constructed, and operated in a safe and environmentally sound manner in accordance with the Convention, including meeting the relevant requirements of:

Regulation 16 – Authorization of Ship Recycling Facilities
Regulation 17 – General requirements
Regulation 18 – Ship Recycling Facility Plan
Regulation 19 – Prevention of adverse effects to human health and the environment
Regulation 20 – Safe and environmentally sound management of Hazardous Materials
Regulation 21 – Emergency preparedness and response
Regulation 22 – Worker safety and training
Regulation 23 – Reporting on incidents, accidents, occupational diseases and chronic effects
Regulation 24 – Initial notification and reporting requirements
Regulation 25 – Reporting upon completion

These requirements are imposed on the Ship Recycling Facility by way of

.....
(Identify the permit, licence, authorization, legal standards, or other mechanism that applies)

Ship Recycling Facility Plan identification/verification number: .....

1.2 Acceptance of ships

For ships to which the Convention applies and ships treated similarly pursuant to Article 3.4 of the Convention, the Ship Recycling Facility can only accept a ship for recycling in accordance with regulation 17 of the Annex to the Convention.

1.3 Safe-for-hot work and Safe-for-entry conditions

The Ship Recycling Facility is capable of establishing, maintaining and monitoring Safe-for-hot work and Safe-for-entry conditions throughout the Ship Recycling process.

1.4 Management of Hazardous Materials

The Ship Recycling Facility is designed, constructed, operated, and required to ensure that all Hazardous Materials' management shall be safe and environmentally sound in compliance with the Convention and with all relevant local or national regulations/requirements.

1.5 Map and location of Ship Recycling operations

A map of the boundary of the Ship Recycling Facility and the location of Ship Recycling operations within it, is attached.

2 CAPABILITY OF SHIP RECYCLING FACILITY

2.1 Size of ships

The Ship Recycling Facility is authorized to accept a ship for recycling subject to the following size limitations:

Maximum Size		Other Limitations
Length		
Breadth		
Lightweight		

2.2 Safe and Environmentally Sound Management of Hazardous Materials

The Ship Recycling Facility is authorized to accept a ship for recycling that contains Hazardous Materials as specified in the following table subject to the conditions noted below:

Hazardous Material(*4)	Management of Hazardous Materials			Authorization/Limitations
	Removal Y/N (*2)	Storage Y/N	Process (*1) Y/N (*3)	
Asbestos				
Ozone-depleting substances				
Polychlorinated biphenyls (PCB)				
Anti-fouling compounds and systems				
Cadmium and Cadmium Compounds				
Hexavalent Chromium and Hexavalent Chromium Compounds				
Lead and Lead Compounds				
Mercury and Mercury Compounds				
Polybrominated Biphenyl (PBBs)				
Polybrominated Diphenyl Ethers (PBDEs)				
Polychlorinated Naphthalenes (more than 3 chlorine atoms)				
Radioactive substances				
Certain Shortchain Chlorinated Paraffins (Alkanes, C10-C13, chloro)				
Hazardous liquids, residues and sediments				
Paints and coatings that are highly flammable and/or lead to toxic release				
Other Hazardous Materials not listed above and that are not a part of the ship structure (specify)				

Notes: *1 Process means the processing of Hazardous Materials in the Ship Recycling Facility, such as:

a. incineration of Hazardous Materials;
b. reclamation of Hazardous Materials; and
c. treatment of oily residues.

*2 If Yes (Y), indicate in the Ship Recycling Facility Plan the responsible personnel authorized to carry out the removal, with the certificate number or other relevant information.

*3 If No (N), describe in the Ship Recycling Plan where the Hazardous Materials are to be processed/disposed.

*4 These Hazardous Materials are specified in Appendices 1 and 2 and regulation 20 of the Convention.

APPENDIX 6

FORM OF REPORT OF PLANNED START OF SHIP RECYCLING

The .....
(Name of Ship Recycling Facility)

located at .....
(Full Ship Recycling Facility address)

Authorized in accordance with the requirements of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention") to conduct Ship Recycling under the authority of the Government of:

.....
(Full designation of country)

as indicated in the Document of Authorization to conduct Ship Recycling issued at

.....
(Place of authorization)

by .....
(Full designation of the Competent Authority under the Convention)

on (dd/mm/yyyy) .....
(Date of issue)

Hereby reports that the Ship Recycling Facility is ready in every respect to start the recycling of the vessel .....
(IMO number)

The International Ready for Recycling Certificate issued under the provisions of the Convention under the authority of the Government of

.....
(Full designation of country)

by .....
(Full designation of the person or organization authorized under the provisions of the Convention)

on (dd/mm/yyyy) .....
(Date of issue)

is enclosed.

Signed .....

APPENDIX 7

FORM OF THE STATEMENT OF COMPLETION OF SHIP RECYCLING

STATEMENT OF COMPLETION OF SHIP RECYCLING

This document is a statement of completion of Ship Recycling for

.....
(*Name of the ship when it was received for recycling/at the point of deregistration*)

Particulars of the Ship as received for recycling

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	
Date of Construction	

THIS CONFIRMS THAT:

The ship has been recycled in accordance with the Ship Recycling Plan as part of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Convention") at

.....
(Name and location of the authorized Ship Recycling Facility)

and the recycling of the ship as required by the Convention was completed on:

(dd/mm/yyyy) .....
(Date of completion)

Issued at .....
(*Place of issue of the Statement of Completion*)

(dd/mm/yyyy) ....
(*Date of issue*) (*Signature of the owner of the Ship Recycling Facility or a representative acting on behalf of the owner*)

ANNEX 2

RESOLUTION MEPC.179(59)
Adopted on 17 July 2009

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 the 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 that regulation 5.3 of the Annex to the Hong Kong Convention requires that Part I of the Inventory of Hazardous Materials shall be properly maintained and updated throughout the operational life of the ship, taking into account the Guidelines developed by the Organization,

NOTING FURTHER that regulation 5.4 of the Annex to the Hong Kong Convention requires that the Inventory shall also incorporate Part II for operationally generated wastes and Part III for stores and shall be verified, taking into account the Guidelines developed by the Organization,

RECALLING 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 fifty-ninth session, the draft Guidelines for the development of the inventory of hazardous materials developed by the Working Group on Guidelines for Ship Recycling,

1. ADOPTS the Guidelines for the development of the inventory of hazardous materials as set out in the Annex to this resolution;

2. INVITES Governments to apply the Guidelines as soon as possible, or when the Convention becomes applicable to them; and

3. AGREES to keep the Guidelines under review.

* * *

ANNEX

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 as to 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 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 1should 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^3 for materials of liquid or gases, m^2 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[1]. 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.

[1] A recognized quality management system may be utilized.

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

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 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
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.

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_2			x
C-23			Perfluorocarbons (PFCs)			x
C-24			Methane			x
C-25			Hydrofluorocarbon (HFCs)			x
C-27			Nitrous oxide(N_2O)			x
C-28			Sulfur hexafluoride (SF_6)			x
C-29	Liquid	Oiliness	Bunkers: fuel oil			x
C-30			Grease			x
C-31			Waste oil (sludge)		x	
C-32			Bilge		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[2)]		x	
C-42		Garbage[2)]		x	
C-43		Fuel tank residues		x	
C-45		Oily solid cargo tank residues		x	
C-45		Oily/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 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• 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	~~Diesel engine, xx Co., xx #150~~	~~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[1)]	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^3	
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^3	
		Sediments	250.00	kg	

Part III STORES

III-1 Stores

No.	Location[1)]	Name of item (classification in appendix 1)	Unit quantity		Figure		Approx. quantity		Remarks[2)]
1	No.1 fuel oil tank	Fuel oil (heavy fuel oil)	-		-		100.00	m^3	
2	CO_2 room	CO_2	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^3	
		Deck machinery hydraulic oil system	Upper deck and bosun store	200.00	m^3	
		Steering gear hydraulic oil system	Steering gear room	0.55	m^3	
2	Lubricating oil	Main engine system	Engine-room	0.45	m^3	
3	Boiler water treatment	Boiler	Engine-room	0.20	m^3	

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[1)]	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).

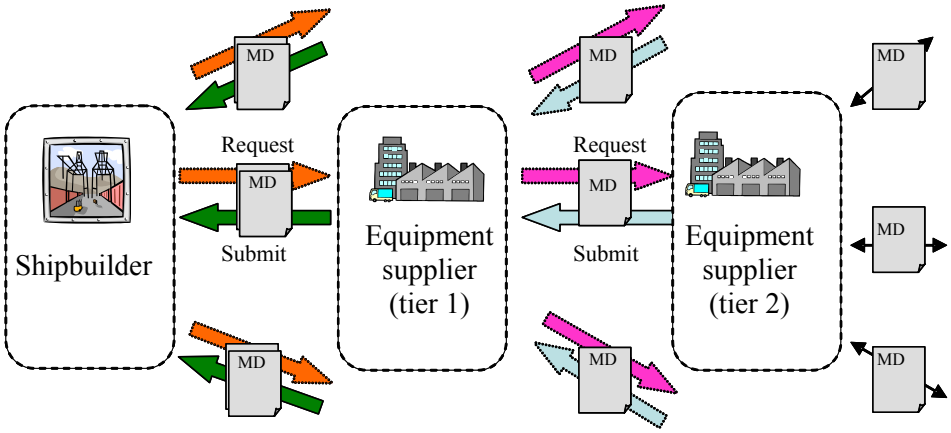


Figure 1 – Process of MD (and SDoC) collection showing involvement of supply chain

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.

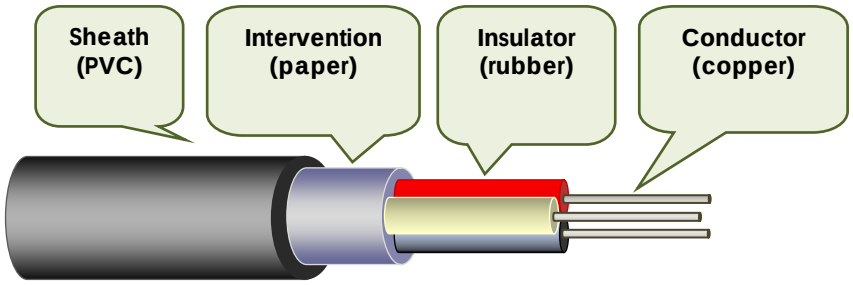


Figure 2 – Example of Homogeneous Materials (cable)

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 1of 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^3 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 0.01kg

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.

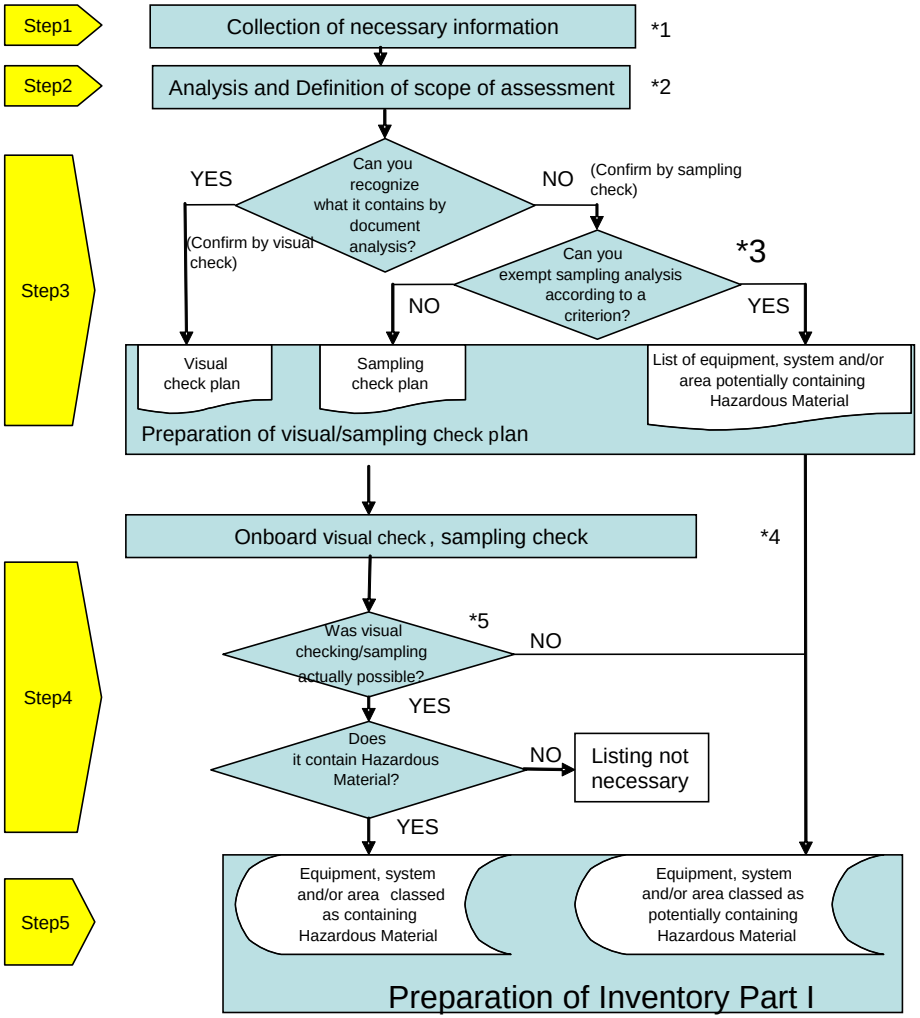
A typical description of a pipe system is shown in Table 4.

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



*1 : Documents may include any certificates, manuals, ship's plans drawings, technical specifications and information from sister and/or similar ships.

*2 : The assessment should cover all materials listed in Table A of Appendix 1 of the Guideline; the materials listed in Table B should be listed as far as practicable.
It is impossible to assess all equipment and areas including those which are assumed not to contain Hazardous Materials described above.
Using analysis of available documents based on knowledge and experience, it must be made clear which equipment and/or area should be included in the scope of the assessment.

*3 : Equipment, system and/or areas which cannot be specified as containing materials listed in appendix 1 of these guidelines on the basis of documents can be listed 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 of the conclusion, such as the impossibility to conduct samplings without compromising ship safety and operational efficiency.

*4 : Sampling Check. This means sampling and identification of Hazardous Material contained in the equipment, systems, and/or areas, by laboratory analysis. The sampling check should be applied where the presence of Prohibited and Restricted Hazardous Material is assumed but cannot be recognized by analysis of the available documentation.

*5 : When equipment, systems and/or areas of a ship are not accessible for visual check or sampling check, this equipment, system and/or area is classified as "potentially containing Hazardous Material".

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[1)].

Compilation of Part I of the Inventory of Hazardous Material for existing ships involves the following 6 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.

1) 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	

Equipment	Component of equipment
Pipe hangers	
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	250g x 14 sheet = 3.50 kg
1.2-3	HCFC	Ref. provision plant	Maker's drawings	20kg 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^2		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^2		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^2		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^2		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, 200X Sampling check： dd, mm, 200X
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, 200X at XX Lines Co. Ltd.

□Preparation date of plan□dd. mm, 200X

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^2	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^2	3.80	Unknown ceiling	Unknown	S	Y	0-25

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 Name of shipbuilder	NNNNNNN 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

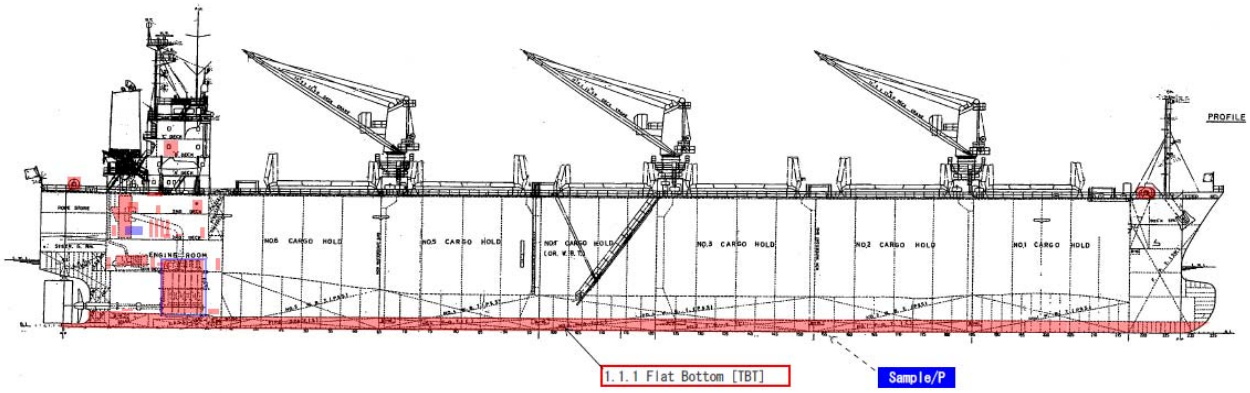
No.	Name of equipment and machinery	Location *1	Materials (classification in appendix 1)	Parts where used	Approx. quantity		Remarks
1	Main engine	Lower floor	Asbestos	Exh. pipe packing	3.50	kg	
2	Aux. boiler	3rd deck	Asbestos	Unknown packing	10.00	kg	PCHM (potentially containing Hazardous Material)
3	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	

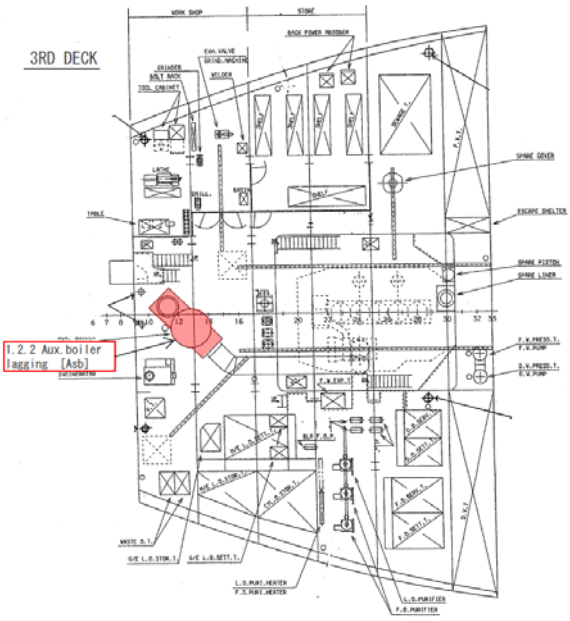
I-3 Structure and hull containing materials listed in Table A and Table B of appendix 1 of the Guidelines

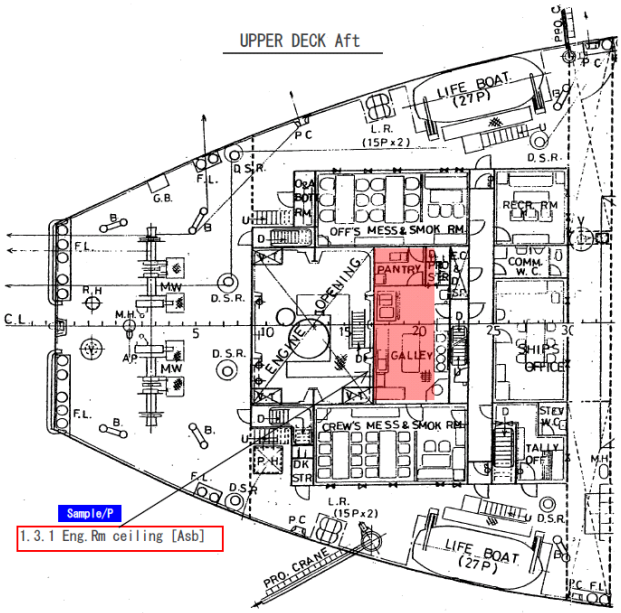
No.	Name of structural element	Location *1	Materials (classification in appendix 1)	Parts where used	Approx. quantity		Remarks
1	Back deck ceiling	Upper deck	Asbestos	Engine-room ceiling (A class)	3.80	kg	Confirmed by sampling
2							
3							

*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.	

<Other information>

Remark 1	
Remark 2	
Remark 3	

<Supplier (respondent) information>

Company name	
Division name	
Address	
Contact person	
Telephone number	
Fax number	
E-mail address	
SDoC ID no.:	

<Product information>

Product name	Product number	Delivered unit			Product information
		Amount	Unit		

<Materials information>

		Unit
This materials information shows the amount of hazardous materials contained in	1	

(unit: piece, kg, m, m^2, m^3, 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	Chlorofluorocaobons (CFCs)	no threshold level				
		Halons					
		Other fully halogenated CFCs					
		Carbon tetrachloride					
		1,1,1-Trichloroethane					
		Hydrochlorofluorocaobons					
		Hydrobromofluorocaobons					
		Methyl bromide					
		Bromochloromethane					
	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
		Pentachlorotrifluoropropane (CFC 213)	2354-06-5
			134237-31-3
		Tetrachlorotetrafluoropropane (CFC 214) 1,1,1,3-Tetrachlorotetrafluoropropane	29255-31-0 2268-46-4
		Trichloropentafluoropropane (CFC 215) 1,1,1-Trichloropentafluoropropane 1,2,3-Trichloropentafluoropropane	1599-41-3 4259-43-2 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) 1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a) 1,1,2,2-tetracloro-1-fluoroethane	134237-32-4 354-11-0 354-14-3

*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
		Trichlorodifluoroethane (HCFC 122)	41834-16-6
		1,2,2-trichloro-1,1-difluoroethane	354-21-2
		Dichlorotrifluoroethane(HCFC 123)	34077-87-7
		Dichloro-1,1,2-trifluoroethane	90454-18-5
		2,2-dichloro-1,1,1-trifluroethane	306-83-2
		1,2-dichloro-1,1,2-trifluroethane (HCFC-123a)	354-23-4
		1,1-dichloro-1,2,2-trifluroethane (HCFC-123b)	812-04-4
		2,2-dichloro-1,1,2-trifluroethane (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
		Tetrachlorotrifluropropane (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

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Table	Material Category	Substances	CAS Numbers
		Dichlorotrifluoropropane (HCFC 243) 1,1-dichloro-1,2,2-trifluoropropane 2,3-dichloro-1,1,1-trifluoropropane 3,3-Dichloro-1,1,1-trifluoropropane	134237-43-7 7125-99-7 338-75-0 460-69-5
		Chlorotetrafluoropropane (HCFC 244) 3-chloro-1,1,2,2-tetrafluoropropane	134190-50-4 679-85-6
		Trichlorofluoropropane (HCFC 251) 1,1,3-trichloro-1-fluoropropane	134190-51-5 818-99-5
		Dichlorodifluoropropane (HCFC 252)	134190-52-6
		Chlorotrifluoropropane (HCFC 253) 3-chloro-1,1,1-trifluoropropane (HCFC 253fb)	134237-44-8 460-35-5
		Dichlorofluoropropane (HCFC 261) 1,1-dichloro-1-fluoropropane	134237-45-9 7799-56-6
		Chlorodifluoropropane (HCFC 262) 2-chloro-1,3-difluoropropane	134190-53-7 102738-79-4
		Chlorofluoropropane (HCFC 271) 2-chloro-2-fluoropropane	134190-54-8 420-44-0
	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	-
Table B (Materials listed in appendix 2 of the Convention)	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

*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 (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	-
	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)
		Decabromobiphenyl and its ethers	13654-09-6
			1163-19-5 (ether)
		Dibromobiphenyl and its ethers	92-86-4
			2050-47-7 (ether)
		Heptabromobiphenylether	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)

*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
		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	-
	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	-

***