

## ATTACHMENT THIRTY-TWO

### Garbage Management Plan (“GMP”)





# Te Ākau Bream Bay Sand Extraction Project

## Garbage Management Plan (GMP)

**July 2025**

THIS PLAN PREPARED ACCORDING TO RESOLUTIONS MEPC.201(62), MEPC.220(63), MEPC 277(70) AND MEPC.295(71)

## 1. SHIPS PARTICULAR



Figure 1: Sand Extraction Vessel "William Fraser"

Table 1: William Fraser Vessel Particulars

Ship Name	MV WILLIAM FRASER
Flag State	NEW ZEALAND
Port of Registry	AUCKLAND
IMO Number	9864605
Gross Tonnage	1540
Type (BV Classified)	DECK SHIP
Regulation Length	68m
Beam	14m
International Call Sign and MMSI	ZMG 3728
Current Ship Owner	McCallum Bros LTD
Number of Crew	4

## 2. ESTIMATE QUANTITY OF GARBAGE GENERATED IN LIVING ROOM

### 2.1. WEIGHT:

ESTIMATE QUANTITY SHOULD BE CALCULATED 1 KG FOR PER PERSON DAILY.

### 2.2. VOLUME:

ESTIMATE QUANTITY SHOULD BE CALCULATED 0.002 CUB.M FOR PER PERSON DAILY.

## 3. PLACARDS

3.1. As a minimum labels of receptacles placards and declaration stating the prohibition and restrictions for discharging garbage (litter) from ships under MARPOL Annex V placards are placed to below area. Minimum dimensions of placards are 12.5 cm by 20 cm.

- GALLEY
- CREW MESS ROOM
- POOP DECK
- ENGINE ROOM
- BRIDGE

## ATTENDANCE RECORD FOR THE FAMILIARISATION AND TRAINING OF GARBAGE MANAGEMENT PLAN



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- 1.1** Covering over 70 percent of the earth's surface, the oceans play a critical role in maintaining the planets life-support systems, in moderating its climate and in sustaining animals and plants.
- 1.2** Garbage (litter) and sewage from ships have traditionally been dumped into the sea as a matter of course and in relation to the amount of similar wastes poured into the sea each year from the land the quantities in the past were not considered excessive.
- 1.3** Today, however, the situation is very different. One reason is the growing every day use of substances such as plastics, which are non-biodegradable, once thrown into the sea; they are extremely persistent and potentially harmful if ingested by seabirds and marine mammals.
- 1.4** With the steady rise in world population, industrialisation and increased shipping activities a reduction of pollution of the oceans and sea-lanes has become a common as well as governmental and inter-governmental matter of concern.
- 1.5** The main international convention regulating the protection of the seas against pollution is MARPOL 73/78. Annex V-MARPOL 73/78 provides regulations regarding handling and disposal board-generated garbage. Further there are national laws and regulations dealing with the same subject, strictly enforced.
- 1.6** These Plan has been developed taking into account the regulations of Annex V, the Articles, and the Resolutions of MARPOL 73, as modified by the Protocol of 1978 (MARPOL 73/78) and the MEPC.295(71) "2017 Guidelines for the implementation of Annex V". Further Annex V, Regulation 10 which indicates placards, garbage management plans, and garbage record keeping

#### **According to Annex V, Regulation 10**

**(1)** 1 Every ship of 12 meters or more in length overall, and fixed or floating platforms shall display placards which notify the crew and passengers of the discharge requirements of regulations 3, 4, 5 and 6 of this Annex as applicable.

2 The placards shall be written in the working language of the ship's crew and for ship engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, shall also be in English, French or Spanish.

**(2)** Every ship of 100 gross tonnage and above and every ship which is certified to carry 15 or more persons and fixed or floating platforms shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for minimizing, collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person or persons in charge of carrying out the plan. Such a plan shall be based on the guidelines developed by the Organization and written in the working language of the crew.

**(3)** Every ship of 400 tons gross tonnage and above and every ship which is certified to carry 15 or more persons engaged in voyages to port or offshore terminals under the jurisdiction of another Parties to the Convention, and every fixed or floating platform shall be provided with a Garbage Record Book. The Garbage Record Book, whether as a part of the ship's official logbook or otherwise, shall be in the form specified in the Appendix II to this Annex;

1 Each discharge into the sea or to a reception facility, or completed incineration, shall be promptly recorded in the Garbage Record Book and signed for on the date of the incineration or discharge by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the Master of the ship. The Entries in the Garbage Record Book shall be at least in English, French or Spanish. Where the entries are also made in an official language of the State whose flag the ship is entitled to fly, the entries in that language shall prevail in case of a dispute or discrepancy

2 The entry for each discharge into the sea under regulations 4, 5, 6 or section 5.2 of chapter 5 of part II-A of the Polar Code shall include date and time, position of the ship (latitude and longitude), category of the garbage and the estimated amount (in cubic metres) discharged. For discharge of cargo residues the discharge start and stop positions shall be recorded in addition to the foregoing.

3 The entry for each completed incineration shall include date and time and position of the ship (latitude and longitude) at the start and stop of incineration, categories of garbage incinerated and the estimated amount incinerated for each category in cubic metres

4 The entry for each discharge to a port reception facility or another ship shall include date and time of discharge, port or facility or name of ship, categories of garbage discharged, and the estimated amount discharged for each category in cubic metres

5 The Garbage Record Book shall be kept on board the ship or the fixed or floating platform, and in such a place as to be readily available for inspection at all reasonable time. This document shall be preserved for a period of at least two years from the date of the last entry made in it.

6 In the event of any discharge or accidental loss referred to in regulation 7 of this Annex an entry shall be made in the Garbage Record Book, or in the case of any ship of less than 400 gross tonnage, an entry shall be made in the ship's official log-book of the date and time of occurrence, port or position of the ship at time of occurrence (latitude, longitude and water depth if known), the reason for the discharge or loss, details of the items discharged or lost, categories of garbage discharged or lost, estimated amount for each category in cubic metres, reasonable precautions taken to prevent or minimize such discharge or accidental loss and general remarks.

**(4)** The Administration may waive the requirements for Garbage Records Book for:

- 1 Any ship engaged on voyages of 1 hour or less in duration which is certified to carry 15 or more persons or,
- 2 Fixed or floating platforms.

**(5)** The competent authority of the Government of a Party to the Convention may inspect the Garbage

Record Book or ship's official log-book on board any ship to which this regulation applies while the ship is in its ports or offshore Terminals and may make copy of an entry in those books, and may require the Master of the ship to certify that the copy is a true copy of such an entry. Any copy so made, which has been certified by the Master of the ship as a true copy of such an entry in the ship's Garbage Record Book or ship's official log-book, shall be admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of a Garbage Record Book or ship's official log-book and taking of a certified copy by the entry. The inspection of a Garbage Record Book and taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

**(6)** The accidental loss or discharge of fishing gear as provided for in regulations 7.1.3 and 7.1.4 which poses a significant threat to the marine environment or navigation shall be reported to the State whose flag the ship is entitled to fly, and, where the loss or discharge occurs within waters subject to the jurisdiction of a coastal State, also to that coastal State.

## 2. PURPOSE

**2.1** The purpose of the Plan is to provide guidance to vessel's personnel in order to fully and effectively implement Annex V, regulations. The Plan is dealing particularly, amongst others, with the following subjects:

- a. Garbage management (Minimising the amount of potential garbage, Shipboard garbage handling and storage procedures, Shipboard equipment for processing garbage.)
- b. Training, education and information;
- c. Management of cargo residues of solid bulk cargoes;
- d. Port reception facilities for garbage; and
- e. Enhancement of compliance with MARPOL Annex V.

**2.2** It is, however understood that the regulatory framework and associated control mechanism established at the national and international level by governments will not provide and maintain acceptable conditions in the seas, without the conscientious involvement and voluntary commitment toward environmental protection of the whole shipping community, and the seafarers particularly.

**2.3** It is, the officers and crewmembers of ships who must actually make the decisions and take the actions that ensure the safe and pollution free operation of vessels.

**2.4** When ships are far from land it is the sense of propriety of the crew that must chiefly be relied upon and not the prospect that the transgression is likely to be discovered and be punished.

**2.5** This Plan is a part of Environmental Policy. "The capacity of the sea to assimilate wastes and render them harmless and its ability to regenerate natural resources is not unlimited"

## 3. Definitions

**3.1** Definitions for terms used in the Plan are listed below. Definitions provided by Regulation 1, Annex V, MARPOL 73/78, shall be considered also, when implementing the Plan.

- a) **"Garbage"** means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, incinerator ashes, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.
- b) **"Food Wastes"** means any spoiled or unspoiled food substances and includes fruits, vegetables, dairy products, poultry, meat products and food scraps, generated aboard ship.
- c) **"Domestic Waste"** means all types of wastes not covered by other Annexes that are generated in the accommodation spaces on board the ship. Domestic wastes does not include grey water.
- d) **"Operational Wastes"** means all solid wastes (including slurries) not covered by other Annexes that are collected on board during normal maintenance or operations of a ship, or used for cargo stowage and handling. Operational wastes also includes cleaning agents and additives contained in cargo hold and external wash water. Operational wastes does not include grey water, bilge water, or other similar discharges essential to the operation of a ship, taking into account the guidelines developed by the Organization.

- e) "**Dishwater**" means the residue from the manual or automatic of dishes and cooking utensils which have been pre-cleaned to the extent that any food particles adhering to them would not normally interfere with the operation of automatic dishwashers.
- f) "**Grey water**" means drainage from dishwater, shower, laundry, bath and washbasin drains. It does not include drainage from toilets, urinals, hospitals and animal spaces, as defined in regulation 1.3 of MARPOL Annex IV (sewage), and it does not include drainage from cargo spaces. Grey water is not considered garbage in the context of Annex V.
- g) "**Oily Rags**" are rags, which have been saturated with oil as controlled in [Annex I](#) to the Convention. Contaminated rags are rags which have been saturated with a substance defined as a harmful substance in the other Annexes to [MARPOL 73/78](#).
- h) "**Cargo Residues**" means the remnants of any cargo which are not covered by other Annexes to the present Convention and which remain on the deck or in holds following loading or unloading, including loading and unloading excess or spillage, whether in wet or dry condition or entrained in wash water but does not include cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship.
- i) "**Plastic**" means a solid material which contains as an essential ingredient one or more high molecular mass polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic. For the purposes of this annex, "all plastics" means all garbage that consists of or includes plastic in any form, including synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products.
- j) "**Fishing Gear**" means any physical device or part thereof or combination of items that may be placed on or in the water or on the sea-bed with the intended purpose of capturing, or controlling for subsequent capture or harvesting, marine or freshwater organisms.
- k) "**Fixed or floating platforms**" means fixed or floating structures located at sea which are engaged in the exploration, exploitation or associated offshore processing of sea-bed mineral resources.
- l) "**Incinerator ashes**" means ash and clinkers resulting from shipboard incinerators used for the incineration of garbage.
- m) "**Cooking oil**" means any type of edible oil or animal fat used or intended to be used for the preparation or cooking of food, but does not include the food itself that is prepared using these oils.
- n) "**Animal carcasses**" means the bodies of any animals that are carried on board as cargo and that die or are euthanized during the voyage.
- o) "**En route**" means that the ship is underway at sea on a course or courses, including deviation from the shortest direct route, which as far as practicable for navigational purposes, will cause any discharge to be spread over as great an area of the sea as is reasonable and practicable.
- p) "**Recycling**" means the activity of segregating and recovering components and materials for reprocessing.
- q) "**Reuse**" means the activity of recovering components and materials for further use without reprocessing.
- r) "**Nearest Land**" meaning is specified with MARPOL Annex V Regulatin 1.11.
- s) "**Special Area**" meaning is specified with MARPOL Annex V Regulatin 1.14.

- t) “E-waste” means electrical and electronic equipment used for the normal operation of the ship or in the accommodation spaces, including all components, subassemblies and consumables, which are part of the equipment at the time of discarding, with the presence of material potentially hazardous to human health and/or the environment.

## 4. GARBAGE MANAGEMENT

### 4.1 MINIMISING THE AMOUNT OF POTENTIAL GARBAGE

**4.1.1** The company is taking steps to minimise the taking aboard of potential garbage, in co-operation with our suppliers, encouraging them to consider their products in terms of the garbage they generate. This procedure will not have desired results without the Master’s support. The master being in direct contact with the local suppliers and having a clear picture of materials delivered to the vessel, is the only one who can ensure that unnecessary and / or undesired items are not taken on board.

**4.1.2** Options that should be considered to decrease the amount of such garbage include the following:

- a) using supplies that come in bulk packaging, taking into account factors such as adequate shelf-life (once a container is open) to avoid increasing garbage associated with such products;
- b) using supplies that come in reusable or recyclable packaging and containers; avoiding the use of disposable cups, utensils, dishes, towels and rags and other convenience items whenever possible; and
- a) avoiding supplies that are packaged in plastic, unless a reusable or recyclable plastic is used...

**4.1.3** When considering selection of materials for stowage and securing of cargo or protection of cargo from the weather, shipowners and operators should consider how much garbage such materials will generate. Options that should be considered to decrease the amount of such garbage include the following:

- a) using permanent reusable coverings for cargo protection instead of disposable or recyclable plastic sheeting;
- b) using stowage systems and methods that reuse dunnage, shoring, lining and packing materials; and
- c) discharging to port reception facilities the dunnage, lining and packaging materials generated in port during cargo activities as its discharge into the sea is not permitted.

### 4.2 SHIPBOARD GARBAGE HANDLING AND STORAGE PROCEDURES

**4.2.1.** Limitations on the discharge of garbage from ships as specified in Annex V are summarised on the placards posted on board. Under certain conditions discharge into the sea of food wastes, animal carcasses, cleaning agents and additives contained in hold washwater, deck and external surface washwater and cargo residues which are not considered to be harmful to the marine environment is permitted.

**4.2.2.** Careful planning and proper execution by crew members is required for obtaining the goals of these Plan The most appropriate procedures for handling and storing garbage on ship will vary depending on factors such as type and size the area of operation, shipboard garbage equipment and storage, under hygienic conditions, space, crew size, duration of voyage, and regulations and facilities at ports of call.

- a) One of the Officer should be appointed as “Environmental Control Officer” (E.C.O) and is responsible for the in compliance with regulations handling of all on board generated garbage. He shall supervise that all departments are following strictly established procedures.
- b) Individual crewmembers, including heads of departments, responsibilities should be indentified and clarified. Lists with the names of crewmembers and their relative duties should be prepared and posted. The warning placards posted on board provide that “All crew members shall not dispose any kind of garbage into the sea unless specific instructions allowing such disposal received from the Master”. The ECO should be the authorised representative of the Master and shall act in this capacity and ensure that requirements of these guidelines are fully implemented.

**4.2.3.** Compliance with regulations and the principle of environment protection require that the garbage generated on board should be managed in specific steps and in a given sequence as described below:

- a) Collection and sorting of garbage by types.
- b) Processing.
- c) Storing.
- d) Discharge at Port Reception Facilities or disposal at sea according to regulations of Annex V.

Correct planning of the above procedures for handling and storing shipboard garbage, will result in reduction of storage space requirements and proper and easy transfer to Port Reception Facilities.

#### **4.2.4. Collecting and Sorting;**

Procedures for collecting garbage generated on board should be based on the consideration of what is permitted and what is not permitted to be discharged into the sea while en route, and whether a particular garbage type can be discharged to port facilities for recycling or reuse. To reduce or avoid the need for sorting after collection, the categories of distinctively marked garbage receptacles must be provided to receive garbage as it is generated.

These separate receptacles would receive:

- Plastics;
- Food wastes
- Cooking oil;
- Domestic waste, operational waste and recyclable or reusable material (paper products, rags, glass, metal bottles, wood, crockery etc.)\*
- Oily rags and any other oily material (garbage that might present a hazard to the ship or crew)
- Cargo residues
- Medical wastes
- Animal wastes, including used bedding from the transport of live animals (due to risk of disease) but excluding drainage from spaces containing living animals;(this may require according to ship type)
- Incinerator ashes
- E-waste generated on board (e.g. electronic cards, gadgets, instruments, equipment, computers, printer cartridges, etc.)

\*For each recyclable and reusable material separate receptacle may be used.

It is noted again that oily materials shall be disposed in accordance with regulations of Annex I (Oil). Deck and Engine Departments may be provided with empty paint cans or barrels for garbage collection in appropriate spaces throughout the ship, but always these receptacles shall be fitted with a tight cover. All garbage receptacles should be secured to prevent loss, spillage, or loss of any garbage that is deposited in the receptacles. All types of garbage collection receptacles shall be clearly marked with the type of garbage they are receiving. Crew responsibilities should be assigned for collecting or emptying these receptacles and taking the garbage to the appropriate processing or storage location.

#### **4.2.5. Plastics;**

Plastics are used for a variety of marine purposes including, but not limited to, packaging (vapour-proof barriers, bottles, containers, liners, bags, cargo wrapping material, foam cushioning material, etc.); ship construction (fibreglass and laminated structures, siding, piping, insulation, flooring, carpets, fabrics, paints and finishes, adhesives, electrical and electronic components, etc.); disposable eating utensils (styrofoam plates, bowls, food containers, cups, etc.); bags; sheeting; floats; fishing nets; fishing lines; strapping bands; wire rope with synthetic fibre sheaths; combination wire rope; rope; line; sails; and many other manufactured plastic items. Regulation 3.2 of Annex V prohibits the discharge of all plastics into the sea.

#### **4.2.6. E wastes;**

All kind of Electronic wastes wastes shall be collected separately in including damaged electrical and electronic equipment. Discharging of E wastes to sea is strictly prohibited, such wastes shall be stored separately and shall be discharged at designated port reception facilities in accordance with laws of the receiving country.

#### **4.2.7. Food Wastes;**

Some Governments have regulations for controlling human, plant and animal diseases that may be carried by foreign food wastes and materials that have been associated with them (e.g. food packing and disposable eating utensils, etc.). These regulations may require incinerating, sterilizing, double bagging or other special treatment of garbage to destroy possible pest and disease organisms. This type of garbage should be kept separate from other garbage and preferably retained for discharge at port reception facilities in accordance with laws of the receiving country.

#### **4.2.8. Synthetic fishing net and line scraps**

As regulation 3.2 of MARPOL Annex V prohibits the discharge into the sea of synthetic fishing net and line scraps generated by the repair or operation of fishing gear, these items should be collected in a manner that avoids their loss overboard. Such material may be incinerated, compacted, or stored along with other plastics or it may be preferable to keep it separate from other types of garbage if it has strong odour or is present in great volume. Unless such garbage is appropriately incinerated, the atmospheric incineration products could be toxic. Onboard incineration should follow regulation 16 of MARPOL Annex VI.

#### **4.2.9. Processing;**

Vessels equipped with incinerators, compactors, comminutors or other devices for shipboard garbage processing must assign the appropriate crew members responsible for operating this equipment on a schedule commensurate with ship needs. In selecting appropriate processing procedures, the following should be considered:

- a) Use of compactors, incinerators, comminutors, and other such devices have a number of advantages such as, reducing shipboard space requirements for storing garbage and making it easier to discharge garbage at port reception facilities. It should be noted that special rules on incineration under domestic law may apply in some ports and may exist in some special areas. Incineration of hazardous materials (e.g. scraped paint, impregnated wood) and certain types of plastics (e.g. PVC-based plastics or other plastics containing hazardous chemicals) calls for special precaution due to the potential environmental and health effects from combustion of by-products. The problems of combustion of by-products are discussed in 4.3.4.
- b) Ships operating primarily in "special areas", Arctic waters or within 3 nautical miles from the nearest land, ice-shelf or fast ice are greatly restricted in what they can discharge. These ships should choose between storage of either compacted or uncompact material for discharging at port reception facilities or incineration with retention of ash and clinkers. This is the most restrictive situation in that no discharge is permitted.

#### **4.2.10. Storage;**

Garbage collected from throughout the ship should be delivered to designated processing or storage locations. Garbage that must be returned to port for discharge at port reception facilities may require storage until arrangements can be made to discharge it ashore for appropriate processing. In all cases, garbage should be stored in a manner which avoids health and safety hazards.

The following points should be considered when selecting procedures for storing garbage:

- a) Sufficient storage space and equipment (e.g. cans, drums, bags or other containers) should be provided. Where storage space is limited, ship operators are encouraged to consider the installation of compactors or incinerators. To the extent possible, all processed and unprocessed garbage stored for any length of time should be in tight, securely covered containers in order to prevent the unintentional discharge of stored garbage;
- b) Food wastes and other garbage to be returned to port and which may carry diseases or pest should be stored in tightly covered containers and be kept separate from other garbage which does not contain such food wastes. Quarantine arrangements in some countries may require double bagging of this type of waste.. The containers should be clearly marked to avoid incorrect disposal and treatment at the P.R.F.

- c) Cleaning and disinfecting are both preventive and remedial pest control methods should be applied regularly in garbage storage areas.
- d) E waste: Collect all E wastes together in the designated storage locations.

#### 4.2.11 Discharge;

Although discharge into the sea of limited types of garbage is permitted under Annex V, discharge of garbage to port reception facilities should be given primary consideration.

When discharging garbage, the following points should be considered:

1. Regulations 4, 5, and 6 of MARPOL Annex V and chapter 5 of part II-A of the Polar Code, summarized in table 1, set forth the requirements for garbage permitted to be discharged into the sea. In general the discharge shall take place when the ship is en route and as far as practicable from the nearest land. Attempts should be made to spread the discharge over as wide an area as possible and in deep water (50 metres or more). Prevailing currents and tidal movements should be taken into consideration when discharging into the sea is permitted; and
2. To ensure timely transfer of large quantities of ship-generated garbage to port reception facilities, it is essential for shipowners, operators or their agents to make arrangements well in advance for garbage reception. At the same time, discharge needs should be identified in order to make arrangements for garbage requiring special handling or other necessary arrangements. Advice should be provided to the port of the type of garbage to be discharged and whether it is separated and the estimated amounts. The port may have special discharge requirements for food wastes and related garbage which may carry certain disease or pest organisms, dunnage, batteries, medicines, outdated pyrotechnics or unusually large, heavy, or odorous derelict fishing gear, etc.
3. While cleaning agents and additives contained in hold washwater, and deck and external surface washwater are considered "operational wastes" and thus "garbage" under Annex V, these cleaning agents and additives may be discharged into the sea so long as they are not harmful to the marine environment. A cleaning agent or additive is considered not harmful to the marine environment if it:
  - a) is not a "harmful substance" in accordance with the criteria in MARPOL Annex III; and
  - b) does not contain any components which are known to be carcinogenic, mutagenic or reprotoxic (CMR).

The ship's record should contain evidence provided by the producer of the cleaning agent or additive that the product meets the criteria for not being harmful to the marine environment. To provide an assurance of compliance, a dated and signed statement to this effect from the product supplier would be adequate for the purposes of a ship's record. This might form part of a Safety Data Sheet or be a stand-alone document but this should be left to the discretion of the producer concerned.

### 4.3 AVAILABLE EQUIPMENT FOR PROCESSING GARBAGE

**4.3.1** The types of equipment available for shipboard garbage handling include incinerators, compactors, comminutors and their associated hardware.

**4.3.2 Comminuters or grinders** a wide variety of food waste grinders are available in the market. These grinders produce slurry of food particles and water that passes easily through the required twenty-five millimetres screen.

**4.3.3. Compactor;** Compaction can reduce the volume of garbage to a compaction ratio, which may be as high 12:1. Most garbage can be compacted. The exceptions include a ground plastics, fiber and paperboard, bulky cargo containers and thick metal items. Pressurised containers should not be compacted since they present an explosive hazard.

**4.3.4. Incinerators;** All incinerators should be approved type according to "Standard Specification for Shipboard Incinerators" developed by IMO. Most garbage is amenable to incineration with the expectation of metal and glass. Incinerators are offered in a wide variety of models to meet every combination of requirements, depending on what type of materials are to be burned and how much. Modern incinerators, with their two-chambers design, produce no particulate emissions in the exhaust gases because of complete combustion during retention in the

second chamber. Control of air pollution is normally required in many ports in the world. Prior to using an incinerator while port, permission may be required from the port authority concerned.

The incineration of garbage that contains a large amount of plastic involves very specific incinerator settings such as higher oxygen injection and higher temperatures (850 to 1,200°C). If these special conditions are not met, depending on the type of plastic and conditions of combustion, some toxic gases can be generated in the exhaust stream, including vaporized hydrochloric (HCl) and hydrocyanic (HCN) acids. These and other intermediary products of combustion of waste containing plastics are toxic to humans and marine life.

## 5. TRAINING, EDUCATION AND INFORMATION

**5.1** Human ignorance and negligence has caused damage to our seas, which in some cases, has reached an irreparable level.

**5.2** There are reasons for concern about the state of the marine environment, and it is essential to understand what is going on, how human activities, shipping in particular affect this environment, and what is the real significance of these effects.

**5.3** There are two ways to prevent pollution of the seas:

- a) Enforced legislation setting specific rules and means to ensure compliance to these rules.
- b) Development of professional ethics and proper behaviour by all seafarers.

**5.4** Legislation is the concern of Governments but the development of ethics and behaviour shall be the concern of everyone involved in the shipping community.

**5.5** It is recognised that uniform and intensive training and education will make a valuable contribution towards the goals of Para.5.3(b).

**5.6** According Masters must promote training, education and information of their respective Crews, through the system of "Safety Meetings On Board".

**Suggested topics to be included in the training are listed below:**

- a) Rubbish is everyone's responsibility, and is a problem growing on a Global scale.
- b) National and international laws relating to or impinging upon shipboard waste management.
- c) Garbage in the marine environment, sources, methods for prevention of release of garbage to the environment and impacts on the environment.
- d) Options and procedures to minimise the generation of garbage.
- e) Procedures established on board, the particular vessel, for the handling and disposition of garbage.
- f) Health and sanitation considerations related to the storage, handling and transfer of garbage.

**5.7** Shore based training, education and information will be provided by the Company to all seagoing personnel to the greatest extent possible, but always on board training is necessary and more rendering.

**5.8** Masters will be up-dated with all relative current laws and regulations, technical information on shipboard garbage management methods, educational material and any other information or reports.

**5.9** Masters are reminded that placards and posters related to garbage handling, which have already been provided, must be permanently posted in conspicuous places in the mess rooms and the bridge.

## 6. MANAGEMENT OF CARGO RESIDUES OF SOLID BULK CARGOES

**6.1** Cargo residues may be discharged in accordance with regulations 4.1.3 and 6.1.2 and paragraph 5.2.1.5 of part II-A of the Polar Code. However, cargo material contained in the cargo hold bilge water should not be treated as cargo residues if the cargo material is not harmful to the marine environment and the bilge water is discharged from a loaded hold through the ship's fixed piping bilge drainage system.

**6.2** Cargo residues are considered harmful to the marine environment and subject to regulations 4.1.3 and 6.1.2.1 of the revised MARPOL Annex V if they are residues of solid bulk cargoes (other than grain) which are classified according to the criteria set out in appendix I of the Annex.

**6.3** Cargo residues that are harmful to the marine environment may require special handling not normally provided by reception facilities. Ports and terminals receiving such cargoes should have adequate reception facilities for all relevant residues, including when contained in washwater.

**6.4** Solid bulk cargoes, as defined in regulation VI/1-1.2 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, other than grain, shall be classified in accordance with appendix I of MARPOL Annex V, and declared by the shipper as to whether or not they are harmful to the marine environment. For ships engaged on international voyages, such declaration should be included in the information required in section 4.2.3 of the IMSBC Code. For ships not engaged on international voyages, other means of declaration may be used, as determined by the Administration.

**6.5** Ports, terminals and ship operators should consider cargo loading, unloading and onboard handling practices<sup>8</sup> in order to minimize production of cargo residues. Cargo residues are created through inefficiencies in loading, unloading, onboard handling. Options that should be considered to decrease the amount of such garbage include the following:

- .1 ensuring ships are suitable to carry the intended cargo and also suitable for unloading the same cargo using conventional unloading methods;
- .2 unloading cargo as efficiently as possible, utilizing all appropriate safety precautions to prevent injury or ship and equipment damage and to avoid or minimize cargo residues; and
- .3 minimizing spillage of the cargo during transfer operations by carefully controlling cargo transfer operations, both on board and from dockside. This should include effective measures to enable immediate communications between relevant ship and shore-based personnel during the transfer operations and when feasible, enclosure of conveyance devices such as conveyor belts. Since this spillage typically occurs in port, it should be completely cleaned up immediately following the loading and unloading event and handled as cargo; delivering it into the intended cargo space or into the appropriate unloading holding area.

**6.6** When the master, based on the information received from the relevant port authorities, determines that there are no adequate reception facilities<sup>9</sup> at either the port of departure or the port of destination in the case where both ports are situated within the same special area or Arctic waters, the condition under regulation 6.1.2.5 of MARPOL Annex V or paragraph 5.2.1.5 of part II-A of the Polar Code should be considered satisfied.

**6.7** MARPOL Annex V, regulation 6.1.2 also applies when the "port of departure" and the "next port of destination" is the same port. To discharge cargo hold washwater in this situation, the ship must be en route and the discharge must take place not less than 12 miles from the nearest land.

## 7. PORT RECEPTION FACILITIES

**7.1.** MARPOL 73/78-Annex V-Regulation 8 provides that "The Government of each party to the Convention undertakes to ensure the provision of facilities at ports and terminals for the reception of garbage, without causing undue delay to ships, and according to the needs of the ships using them".

**7.2.** It is not known if all maritime Countries have already established such facilities, but in any case the use such facilities, when available, shall be employed. Cost consideration shall not prevail and shall not influence garbage handling on board. It shall be clear to all Masters that the Company's Management is committed to the principle of "CLEANS" and therefore in every aspect of the vessel's operation the Master shall be motivated and governed by this principle.

- 7.3. It should be noted that, due to possibly existing different procedures for reception, for reception may require separation on board of:
- food wastes (e.g. animal derived products and by-products because of risk of animal diseases);
  - cooking oil (animal derived products and by-products because of risk of animal diseases);
  - plastics;
  - domestic waste, operational waste and recyclable or reusable material;
  - special items like medical waste, outdated pyrotechnics and fumigation remnants;
  - animal wastes, including used bedding from the transport of live animals (due to risk of disease) but excluding drainage from spaces containing living animals; and
  - cargo residues
  - E-waste generated on board (e.g. electronic cards, gadgets, instruments, equipment, computers, printer cartridges, etc.)

7.4. A garbage management log has been prepared by the Company and shall be used on board all vessels for recording handling and disposal of on board generated garbage.

## 8. ENHANCEMENT OF COMPLIANCE WITH ANNEX V.

- 8.1. It is recognised that enforcement of Annex V regulations, particularly at sea, is difficult to accomplish. Restrictive and punitive measures alone are not enough. The consent and sensitivity of all Seafarers is required and must be obtained.
- 8.2. For individual vessel “Garbage Management Plan” should be onboard. Copies shall be distributed to the E.C.O. the Chief Engineer and the head of catering dept.
- 8.3. Office personnel attending the vessels have been instructed, by Company, to check and verify compliance with the “Annex V” and the Plan.
- 8.4. Ships should inform their flag State of ports in foreign countries Party to Annex V which do not have adequate port reception facilities for garbage.

# APPENDIX-1 GARBAGE MANAGEMENT LOG

*Note : This part should be prepared in accordance with ship specific informations.*

## 1. INTRODUCTION

- 1.1** Handling and disposal of on board generated garbage is controlled by MARPOL 73/78 Annex V Regulations. Details of handling and disposal shall be daily recorded and records retained on board for inspection by Authorities and future reference.
- 1.2.** The Master should consult, Garbage Management Plan before establishing on board procedures for handling and disposal of garbage, the following:
- 1.3.** The Garbage Record Book shall be kept by the E.C.O. and present to the Master.
- 1.4.** Some of the items to be recorded have been codified, as described in Para. (2).

## 2. CODIFICATION OF ITEMS TO BE RECORDED

### 2.1. VESSELS POSITION (A)

- A1** In Special Area : More than 12 N.M. from shore  
**A2** Outside Sp.Area : More than 3 N.M. from shore  
**A3** Outside Sp.Area : More than 12 N.M. from shore  
**A4** In Port Area

### 2.2 GARBAGE CATEGORIES

#### Part I

- A** Plastics  
**B** Food wastes  
**C** Domestic wastes  
**D** Cooking oil  
**E** Incinerator ashes  
**F** Operational wastes  
**G** Animal carcasses  
**H** Fishing gear  
**I** E-waste

#### Part II

- J** Cargo residues (non-HME)  
**K** Cargo residues (HME)

### 2.3. GARBAGE DISPOSAL METHOD

- To shore reception facilities  
Incinerated  
Disposed at sea  
Retained on board for delivery to shore facilities

## 3. ENTRIES IN THE GARBAGE RECORD BOOK

- 3.1** In the column, you may enter both the relative code, as described under Para.2.1. and the vessel's position (Lat+long).
- 3.2** If necessary, owing to various handling and disposal operations, more than one line for the same day may be used.

**3.3** The capacity, in m<sup>3</sup>, of each garbage receptacle used on board should be determined and recorded, in order to assist in filling the column quantity-m<sup>3</sup>

**3.4** Every entry in the Garbage Record Book shall be signed by the Chief Officer (E.C.O.) in the column provided (Signature) and when the page is completed countersigned by the Master

**3.5** When garbage is discharged to Port Reception Facilities (PRF), relative receipts must be obtained and attached to the Garbage Record Book. In case for any reason such receipt cannot be obtained a relative entry should be made in the column "Certification/Signature". Identification of the PRF and the reason for not obtaining receipt should be included the entry.

As a result entries shall be made on each of the following occasions:

- a) When garbage is discharged into the sea in accordance with regulations 4, 5 or 6 of Annex V of MARPOL;
  - i. Date and time of discharge,
  - ii. Position of the ship (latitude and longitude). Note: for cargo residue discharges, include discharge start and stop positions
  - iii. Category of garbage discharged,
  - iv. Estimated amount discharged for each category in m<sup>3</sup>,
  - v. Signature of the officer in charge of the operation.
- b) When garbage is discharged to reception facilities ashore or to other ships;
  - i. Date and time of discharge,
  - ii. Port or facility, or name of ship,
  - iii. Category of garbage discharged,
  - iv. Estimated amount discharged for each category in m<sup>3</sup>,
  - v. Signature of the officer in charge of the operation.
- c) When garbage is incinerated;
  - i. Date and time of start and stop of incineration,
  - ii. Position of the ship (latitude and longitude) at the start and stop of incineration
  - iii. Categories of garbage incinerated,
  - iv. Estimated amount incinerated in m<sup>3</sup>,
  - v. Signature of the officer in charge of the operation.
- d) Accidental or other exceptional discharges or loss of garbage into sea, including in accordance with regulation 7 of Annex V of MARPOL;
  - i. Date and time of occurrence,
  - ii. Port or position of the ship at time of occurrence (latitude, longitude and water depth if known)
  - iii. Categories of garbage discharged or lost,
  - iv. Estimated amount for each category in cubic metres,
  - v. The reason for the discharge or loss and general remarks.

## **RECEIPTS**

The Master should obtain from the operator of the port reception facilities, which includes barges and tracks, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates must be kept together with the Garbage Record Book.

## **AMOUNT OF GARBAGE**

The amount of garbage on board should be estimated m<sup>3</sup> if possible separately according to category. The Garbage Record Book contains many references to estimated amount of garbage. It is recognised that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimates will differ before and after processing. Some processing procedures may not allow for a useable estimate of volume, e.g. the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

## 4. GARBAGE HANDLING EQUIPMENT

*Note: All information should be filled comply with the ship*

### 4.1 GARBAGE RECEPTACLES: *Available*

.1) For plastics in: **GALLEY**

- a) CREW'S PANTRY*
- b) AFTCASTLE*
- c) ENGINE ROOM*

.2) For food waste in: **GALLEY**

- a) CREW'S PANTRY*

.3) For cooking oil: **GALLEY**

.4) For other garbage in: **GALLEY**

*(paper products, rags*

*Glass etc.)*

- a) CREW'S PANTRY*
- b) AFTCASTLE*
- c) ENGINE ROOM*

.5) For Oily rags and any other oily material in: **ENGINE ROOM**

- a) AFT CASTLE*

.6) Cargo Residue: **AFT CASTLE**

### 4.5 GARBAGE STORING: *Yes*

a) Spaces provided: **AFTCASTLE**

b) All type of garbages is stored in relative receptacles on aftcastle.

## 5. GARBAGE MANAGEMENT PROCEDURES

*Note: All information should be filled comply with the ship*

**5.1.** The Chief Officer is appointed as the "Environmental Control Officer "(E.C.O.) and is responsible for the in compliance with regulations handling of all on board generated garbage.

**5.2.** On board procedures are in full compliance with MARPOL requirements and Company's "Garbage Management Plan"

### 5.3 COLLECTION

Garbage generated in various spaces of the vessel are collected as follows. Transportation of collected garbages to storage area (aftcastle) should be coordinate by E.C.O. with responsible personnel.

a) Living Spaces : Collection in the relative receptacle provided in the  
**GALLEY**  
**OFFICER'S PANTRY**  
**CREW'S PANTRY**  
Responsible personnel : **CHIEF COOK / STEWARD**

b) Deck Department : Collection in the relative receptacle provided in

**AFTCASTLE**

Responsible personnel : **BOATSWAIN**

c) Engine Department : Collection in the relative receptacle provided in  
**ENGINE ROOM**  
 Responsible personnel : **DONKEYMAN / FIRST ENGINEER**

c) Cargo Area : Collection in the relative receptacle provided  
**AFTCASTLE**  
 Responsible personnel : **BOATSWAIN**

#### 5.4. STORING / DISPOSITION

- a) Storing and disposition of garbage where this is allowed by Regulations, is responsibility of the E.C.O.
- b) Personnel responsible for storing and disposing garbage is: Chief Cook/Steward, Boatswain, Donkeyman / First Engineer
- c) Above personnel should receive daily instructions from the ECO regarding storing and/or disposition procedures. Without specific instructions from the ECO, any garbage storing and/or disposition procedure is not allowed.

#### 6. CREW INFORMATION / TRAINING

- 6.1** All serving crewmembers have been informed regarding garbage-handling regulations during meetings held on board.
- 6.2** Including newly joined and the all other crewmembers have been informed and have given a training program. Refer to records.
- 6.3** Crew training in accordance with Company's "Garbage Management Plan" should be conducted and endorse in the table shown in the attendance sheet shown in the begining.

#### 7. CONFIRMATION OF INFORMATION

It is hereby confirmed that I have been informed by the vessel's ECO on the existing Regulations of MARPOL 73/78-Annex V regarding garbage handling/disposition.

Furthermore I have been informed on the Company's "Garbage Management Plan" and relative Procedures established on board.

DATE	NAME	RANK	SIGNATURE

**Table 1 - Summary of –restriction to the discharge of garbage into the sea under regulations 4, 5, 6 and 14 of MARPOL Annex V and chapter 5 of part II-A of the Polar Code**

**GARBAGE TYPE AND MINIMUM DISTANCES FOR DISPOSAL FACILITIES**

GARBAGE TYPE <sup>1</sup>	ALL SHIPS EXCEPT PLATFORMS <sup>4</sup>		OFFSHORE PLATFORMS LOCATED MORE THAN 12 nm FROM NEAREST LAND AND SHIPS WHEN ALONGSIDE OR WITHIN 500 METRES OF SUCH PLATFORMS <sup>4</sup> REGULATION 5
	OUTSIDE SPECIAL AREAS REGULATION 4 (Distance are from the nearest land)	WITHIN SPESIAL AREAS REGULATION 6 (Distance are from nearest land or nearest ice-shelf)	
FOOD WASTE COMMINUTED OR GROUND <sup>2</sup>	>3 nm, en route and as far as practicable	>12 nm, en route and as far as practicable <sup>3</sup>	Discharge permitted
FOOD WASTE NOT COMMINUTED OR GROUND	>12 nm, en route and as far as practicable	Discharge prohibited	Discharge prohibited
CARGO RESIDUES <sup>5, 6</sup> NOT CONTAINED IN WASHWATER	> 12 nm, en route and as far as practicable	Discharge prohibited	Discharge prohibited
CARGO RESIDUES <sup>5, 6</sup> CONTAINED IN WASHWATER	> 12 nm, en route and as far as practicable	> 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2 and paragraph 5.2.1.5 of part II-A of the Polar Code)	Discharge prohibited
CLEANING AGENTS AND ADDITIVES <sup>6</sup> CONTAINED IN CARGO HOLD WASHWATER	Discharge permitted	> 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2 and paragraph 5.2.1.5 of part II-A of the Polar Code)	Discharge prohibited
CLEANING AGENTS AND ADDITIVES <sup>6</sup> IN DECK AND EXTERNAL SURFACES WASHWATER	Discharge permitted	Discharge permitted	Discharge prohibited
ANIMAL CARCASSES (SHOULD BE SPLIT OR OTHERWISE TREATED TO ENSURE THE CARCASSES WILL SINK IMMEDIATELY)	Must be en route and as far from the nearest land as possible. Should be >100 nm and maximum water depth	Discharge prohibited	Discharge prohibited
ALL OTHER GARBAGE INCLUDING PLASTICS, SYNTHETIC ROPES, FISHING GEAR, PLASTIC GARBAGE BAGS, INCINERATOR ASHES, CLINKERS,	Discharge prohibited	Discharge prohibited	Discharge prohibited

COOKING OIL, FLOATING DUNNAGE, LINING AND PACKING MATERIALS, PAPER, RAGS, GLASS, METAL, BOTTLES, CROCKERY AND SIMILAR REFUSE			
E WASTE	Discharge prohibited	Discharge prohibited	Discharge prohibited
<p>1 When garbage is mixed with or contaminated by other harmful substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.</p> <p>2 Comminuted or ground food wastes must be able to pass through a screen with mesh no larger than 25 mm.</p> <p>3 The discharge of introduced avian products in the Antarctic area is not permitted unless incinerated, autoclaved or otherwise treated to be made sterile. In polar waters, discharge shall be made as far as practicable from areas of ice concentration exceeding 1/10; in any case food wastes shall not be discharged onto the ice.</p> <p>4 Offshore platforms located 12 nm from nearest land and associated ships include all fixed or floating platforms engaged in exploration or exploitation or associated processing of seabed mineral resources, and all ships alongside or within 500 m of such platforms.</p> <p>5 Cargo residues means only those cargo residues that cannot be recovered using commonly available methods for unloading.</p> <p>6 These substances must not be harmful to the marine environment.</p> <p>7 E Waste shall be discharged through the designated facilities at port reception facilities in accordance with laws of the receiving country.</p>			

## GARBAGE RECORD BOOK PART I

Name of Ship	Distinctive number or letters	IMO number

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore) OR NAME OF SHIP (if discharged to another ship)	CATEGORY	ESTIMATED AMOUNT DISCHARGED		ESTIMATED AMOUNT INCINERATED (m <sup>3</sup> )	REMARKS: (e.g. start/stop time and position of incineration; general remarks)	CERTIFICATION / SIGNATURE
			INTO SEA (m <sup>3</sup> )	TO RECEPTION FACILITIES OR TO ANOTHER SHIP (m <sup>3</sup> )			

DATE/TIME	POSITION OF THE SHIP (latitude/longitude and water depth if known)	CATEGORY	ESTIMATED AMOUNT LOST OR DISCHARGED (m <sup>3</sup> )	REMARKS ON THE REASON FOR THE DISCHARGE OR LOSS AND GENERAL REMARKS : (e.g. reasonable precautions taken to prevent or minimize such discharge or accidental loss and general remarks)	CERTIFICATION / SIGNATURE

### Categories:

- A. Plastics
- B. Food wastes
- C. Domestic Wastes
- D. Cooking Oil
- E. Incinerator ashes
- F. Operational wastes
- G. Animal Carcass(es)
- H. Fishing Gear
- I. E-waste

## GARBAGE RECORD BOOK PART II

Name of Ship	Distinctive number or letters	IMO number
MV WILLIAM FRASER	876546	9864605

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore)	CATEGORY	ESTIMATED AMOUNT DISCHARGED		START AND STOP POSITIONS OF THE SHIP FOR DISCHARGE INTO THE SEA	CERTIFICATION / SIGNATURE
			INTO SEA (m <sup>3</sup> )	TO RECEPTION FACILITIES OR TO ANOTHER SHIP (m <sup>3</sup> )		

**Categories:**

J. Cargo residues (non-HME)

K. Cargo residues (HME)

## APPENDIX-2 PLACARD AND LABEL SAMPLES

### Sample placard targeting crew and shipboard operations

## Discharge of all garbage into the sea is prohibited except provided otherwise

The MARPOL Convention and domestic law prohibit the discharge of most garbage from ships. Only the following garbage types are allowed to be discharged and under the specified conditions.

Outside Special Areas designated under MARPOL Annex V and Arctic waters:

- Comminuted or ground food wastes (capable of passing through a screen with openings no larger than 25 millimetres) may be discharged not less than 3 nautical miles from the nearest land.
- Other food wastes may be discharged not less than 12 nautical miles from the nearest land.
- Cargo residues classified as not harmful to the marine environment may be discharged not less than 12 nautical miles from the nearest land.
- Cleaning agents or additives in cargo hold, deck and external surfaces washing water may be discharged only if they are not harmful to the marine environment.
- With the exception of discharging cleaning agents in washing water, the ship must be en route and as far as practicable from the nearest land.

Inside Special Areas designated under MARPOL Annex V and Arctic waters

- More stringent discharge requirements apply for the discharges of food wastes and cargo residues; AND
- Consult Annex V, chapter 5 of part II-A of the Polar Code and the shipboard garbage management plan for details.

For all areas of the sea, ships carrying specialized cargos such as live animals or solid bulk cargoes should consult Annex V and the associated Guidelines for the implementation of Annex V.

Discharge of any type of garbage must be entered in the Garbage Record Book  
Violation of these requirements may result in penalties.

Sample placard targeting fixed or floating platforms and ships operating within 500 metres of such platforms

## Discharge of all garbage into the sea is prohibited except provided otherwise

The MARPOL Convention and domestic law prohibit the discharge of all garbage into the sea from fixed or floating platforms and from all other ships when alongside or within 500 metres of such platforms.

Exception: Comminuted or ground food wastes may be discharge from fixed or floating platforms located more than 12 miles from the nearest land and from all other ships when alongside or within 500 metres of such platforms. Comminuted or ground food wastes must be capable of passing through a screen no larger than 25 millimetres.

Discharge of any type of garbage must be entered in the Garbage Record Book  
Violation of these requirements may result in penalties.

### Sample placard targeting passengers

## Discharge of all garbage into the sea is prohibited except provided otherwise

The MARPOL Convention and domestic law generally prohibit the discharge of most forms of garbage from ships into the sea.

Violation of these requirements may result in penalties.

All garbage is to be retained on board and placed in the bins provided.

## **GARBAGE DISPOSAL PLAN - MARPOL 73/78 ANNEX V**

According to IMO Resolution MEPC.277(70), MEPC.295(71), MEPC.201(62), and MEPC.264(68)

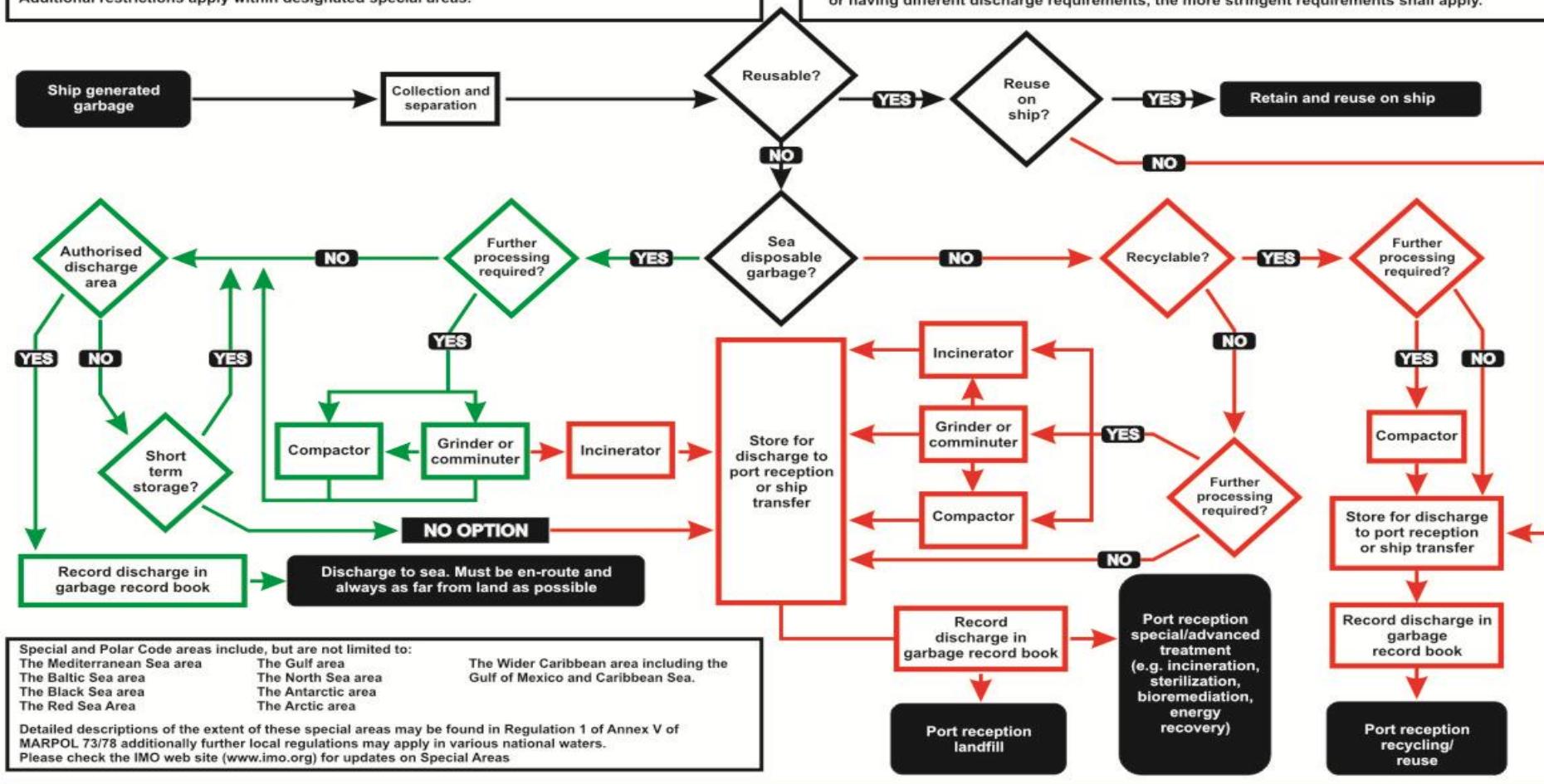
***Discharge of all garbage into the sea is prohibited unless expressly provided for otherwise. Food waste, cargo residues and cleaning agents not harmful to the marine environment and carcasses of dead animals are the only types of garbage that may, under certain circumstances and dependant on the location and distance from the shore, ice shelf or fast ice be discharged into the sea.***

Additional restrictions apply within designated special areas.

The following must not be disposed of anywhere in the oceans, ice or navigable waters of the world.

Plastics - Synthetic ropes - Fishing gear - Plastic garbage bags - Incinerator ashes - Clinkers - Cooking oil - Floating Dunnage - Lining and packing materials - Paper - Rags - Glass - Metal - Bottles - Crockery - E-Waste and similar refuse.

When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.



## LABELS OF RECEPTACLES

Label for non-recyclable plastic



Label for food waste



Labels for Operational waste, Domestic waste and Recyclable and reusable waste



Label for Medical waste



Labels for various garbage

