International Standard

ISO 24146-1

First edition
2024-05

Ships and marine technology — Shipboard waste on inland navigation vessels —

Part 1: On board management and handling

Navires et technologie marine — Déchets à bord des bateaux de navigation intérieure —

Partie 1: Gestion et manutention à bord

Reference number
ISO 24146-1:2024(en)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology, S*ubcommittee SC 2, *Marine environment protection.*

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Disposal of waste from vessels is of increasing concern to all industry stakeholders, including ports, governments, companies, vessels, and the environment. The management of shipboard waste for sea-going vessels is extensively controlled by the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)[2]. Parties to the MARPOL Convention have implemented regional and national legislation to regulate and enforce provisions for handling ships' waste and for providing adequate reception stations at ports and terminals.

While the focus of public attention is mostly directed at the deep sea ("plastic soup"), inland navigation also plays an important role. Inland waterways are environmentally and ecologically sensitive, especially with respect to the various end uses of the water, including intermodal activities and inland water transport. The permissible levels of discharge into inland waters of polluting substances are incorporated in legal instruments which regulate the environment and ecology, relevant regional or subregional agreements, or stipulated by local authorities. These levels can differ between countries, waterways, or river basins.

Additionally, discharges of wastes on inland waterways can be carried down streams and watersheds and can end up in the ocean.

The system for handling waste which is generated on board inland vessels is rather complex, with requirements varying from region to region. For example, there is a general provision for the separate collection of different types of waste on board vessels, but depending on the river/river basin, the requirements can be vastly different (e.g. rivers of international importance where harmonized rules apply to the whole river, or rivers solely regulated at the national level and/or local level). Consequently, there is no consistent method for handling waste generated on board all inland vessels.

By seeking as much compatibility as possible with existing waste separation schemes on shore, the recognition of waste separation on board vessels can be stimulated.

NOTE Examples of international and regional provisions for the collection, storage and delivery of waste are the Convention on the collection, deposit and reception of waste generated during navigation on the Rhine and other inland waterways (CDNI)[7], the European Code for Inland Waterways (CEVNI)[8], the US Code of Federal Regulations[12], and the Recommendations on the organization of the collection of waste from vessels operating on the Danube[11].

This document was developed based on ISO 21070 and provides for minimization, management and segregation of waste generated on board inland vessels so that it can be managed on board and offloaded efficiently to the reception stations located at inland ports and on waterways.

To obtain the most efficient management of waste and to reduce the time and resource burden in segregating and handling waste on inland vessels and at inland ports, the concept of waste minimization has been integrated into this document by incorporating the following basic principle: prevention before recycling before energy recovery before disposal.

Ships and marine technology — Shipboard waste on inland navigation vessels —

Part 1:
On board management and handling

1 Scope

This document provides requirements on the management of waste generated during the operation of inland navigation vessels, including handling, collection, separation, marking, treatment, and storage on board of the vessel. It also describes the ship-to-shore interface and the delivery of waste from the vessel to the reception station.

Small crafts or vessels can use this document to improve their waste management.

This document also provides information for segregating and managing waste that any reception station worldwide can expect from inland navigation vessels and concentrates on:

— prevention/elimination/minimization of waste prior to sailing;

— minimization of waste at the source on the inland vessel;

— waste collection at the source;

— waste segregation on the inland vessel into defined categories that are recognized globally and fit into any of the different waste categorization systems around the world;

— waste minimization once segregated;

— waste storage on board the vessel, and

— health and safety concerns surrounding the handling, storage, and offloading of waste.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 General terms

3.1.1
competent authority
person or organization that has the legally delegated or invested authority, capacity, or power to perform a designated function

3.1.2
discharge
release, however caused, from a *vessel* (3.1.9) including any escape, disposal, spilling, leaking, pumping, emitting, or emptying

[SOURCE: MARPOL consolidated edition 2022, Article 2 (3)(a)]

3.1.3
hazardous waste
waste (3.1.10) which, due to its nature, physical, chemical or infectious properties, is potentially hazardous to human health and/or the environment during use, handling, storage or transportation, including any material which may require special handling, disposal or recycling techniques to eliminate or reduce the hazard

[SOURCE: ISO 21070:2017, 3.1.3]

3.1.4
inland vessel
inland navigation vessel
vessel (3.1.9) intended solely or mainly for navigation on inland waterways

[SOURCE: UNECE Glossary for IWT, 2022, definition I.I.01]

3.1.5
reception station
vessel (3.1.9), a floating establishment, or a facility on shore approved by the *competent authorities* (3.1.1) for the collection of *waste* (3.1.10) generated on board

Note 1 to entry: Other local, national, regionals regulation may use other terms for reception stations as defined in ISO 21070 such as "port reception facilities."

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.R.01, modified]

3.1.6
recycling
activity of segregating and recovering components and materials for reprocessing

[SOURCE: ISO 21070:2017, 3.1.5]

3.1.7
reuse
activity of recovering components and materials for further use without reprocessing

[SOURCE: ISO 21070:2017, 3.1.6]

3.1.8
small craft
vessel (3.1.9) with a hull less than 20 m long without rudder or bowsprit, except vessels built or equipped to tow, push or propel vessels other than small craft in side-by-side formation and excluding craft authorized to carry more than 12 passengers, ferryboats and pushed barges

[SOURCE: UNECE Glossary for IWT, 2022, definition V.S.10, modified]

3.1.9
vessel
inland navigation vessel, seagoing vessel, or floating equipment

[SOURCE: CDNI, Article 1, g]

3.1.10
waste
substances or objects which are disposed of, or are intended to be disposed of, or are required to be disposed of, by the provisions of national law

[SOURCE: Basel Convention, 1989, article 2, definition 1]

3.1.11
waterway
inland water open to navigation

Note 1 to entry: It includes rivers, canals, lakes or other stretches of water which by natural or man-made features are suitable for navigation.

[SOURCE: CEVNI chapter 1, section IV, definition 12]

3.2 Terms relating to waste

3.2.1
bilge water
oily water from the engine room bilges, peak, cofferdams, double-hull spaces, or side compartments

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.B.01]

3.2.2
cargo residue
remnants of any cargo material which remain on the deck or in holds following loading or unloading, including loading and unloading excess or spillage, whether in wet or dry conditions or entrained in *wash water* (3.2.20) but does not include cargo dust remaining on the deck after sweeping, or dust on the external surfaces of the ship

Note 1 to entry: This residue is not covered by other annexes to the MARPOL Convention.

Note 2 to entry: This also includes liquid cargo which cannot be pumped out of the cargo tanks or piping by means of the stripping system.

[SOURCE: MARPOL, Annex V, reg 1.2]

3.2.3
cargo-related waste
waste (3.1.10) and wastewater generated on board the *vessel* (3.1.9) and deriving from the cargo

Note 1 to entry: *Residual cargo* (3.2.16) and *handling residues* (3.2.8) are not included in this category.

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.C.01]

3.2.4
contaminated rag
rag which has been saturated with any substance defined as potentially hazardous or harmful to human health and/or the environment

3.2.5
domestic wastewater
wastewater from galleys, dining rooms, washing facilities and laundry facilities, and water containing faecal matter

Note 1 to entry: Domestic wastewater includes both waste types “sewage” and “grey water”, according to the MARPOL Convention.

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.D.01]

3.2.6
e-waste
electrical or electronic equipment, which is *waste* (3.1.10), including all components, sub-assemblies and consumables which are part of the product at the time of discarding

[SOURCE: Article 3(a) of Directive 2002/96/EC]

3.2.7
garbage
food *waste* (3.1.10), *household refuse* (3.2.9) and *operational waste* (3.2.12), all *plastics* (3.2.14), *cargo residue* (3.2.2), 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 MARPOL Convention (i.e. excluding Annex V)

Note 1 to entry: 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.

[SOURCE: MARPOL consolidated edition 2022, Annex V, reg.1.9]

3.2.8
handling residues
cargo which falls on the *vessel* (3.1.9) outside the hold during handling

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.H.01]

3.2.9
household refuse
domestic refuse
on board organic and inorganic household *waste* (3.1.10) and food remains generated from the operation of the *vessel* (3.1.9), except for the components of *oily and greasy waste* (3.2.11), *cargo-related waste* (3.2.3), *residual cargo* (3.2.16), *handling residues* (3.2.8), *sludge* (3.2.18), *slops* (3.2.17) and other *special waste* (3.2.13)

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.H.02, modified]

3.2.10
oily rag
rag that has been saturated with or contains oil

3.2.11
oily and greasy waste
used oils (3.2.19), *bilge water* (3.2.1) and other oily or greasy waste generated from the operation of the *vessel* (3.1.9) such as waste grease collected from runoff from greasers, bearings and greasing facilities, and other non-reusable grease, filters, *oily rags* (3.2.10), and receptacles and packaging for such waste

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.O.01, modified]

3.2.12
operational waste
solid *waste* (3.1.10) (including slurries) not covered by the annexes to the MARPOL Convention other than Annex V, that are collected on board during normal maintenance or operations of a *vessel* (3.1.9), or used for cargo stowage and handling

Note 1 to entry: Operational waste includes, but is not limited to, the following wastes associated with cargo storage and handling: dunnage, shoring, pallets, lining, transit and packing materials, plywood, paper, cardboard, plastic wrapping, and steel strapping.

Note 2 to entry: Operational waste also includes cleaning agents and additives contained in external *wash water* (3.2.20).

Note 3 to entry: Operational waste does not include wastewater, *bilge water* (3.2.1), or other similar *discharges* (3.1.2) essential to the operation of a *vessel* (3.1.9).

Note 4 to entry: Wooden material can be defined as quarantine waste in certain countries.

[SOURCE: MARPOL, Annex V, reg 1.12]

3.2.13
other special waste
waste (3.1.10) generated from the operation of the *vessel* (3.1.9) other than *oily and greasy waste* (3.2.11) and other than *domestic wastewater* (3.2.5), *household refuse* (3.2.9), *sludge* (3.2.18), and *slops* (3.2.17)

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.O.02]

3.2.14
paper product
product made of paper

EXAMPLE Sheet of paper, box or envelope.

Note 1 to entry: Paper products can include a small amount of adhesives or binding materials.

3.2.15
plastic
solid material which contains as an essential ingredient one or more high molecular mass polymers, and which is formed (shaped) during either the manufacture of the polymer or the fabrication into a finished product by heat and/or pressure

Note 1 to entry: Plastics have material properties ranging from hard to brittle, to soft and elastic.

Note 2 to entry: For the purpose of this document, plastics include plastic in any form, including synthetic ropes, synthetic fishing nets, plastic waste bags, adhesives and binding materials and incinerator ashes from plastic products.

[SOURCE: MARPOL Annex V, reg 1.13]

3.2.16
residual cargo
liquid cargo remaining in the cargo tank or cargo piping after unloading when a stripping system has not been used, and dry cargo remaining in the holds after unloading before manual or mechanical sweepers or suction facilities are used

Note 1 to entry: The stripping system is according to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.R.02]

3.2.17
slops
mixture of *cargo residue* (3.2.2) with *wash water* (3.2.20), rust, or *sludge* (3.2.18) whether or not suitable for pumping

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.S.01]

3.2.18
sludge
residue produced on board the *vessel* (3.1.9) by the operation of an on board sewage treatment plant

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.S.02, modified]

3.2.19
used oil
waste oil or other non-reusable oil from engines, gears and hydraulic or other equipment generated on board

Note 1 to entry: This may be lubricating oils or other oils generated on board.

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.U.02, modified]

3.2.20
wash water
water from the washing of swept or vacuumed holds or stripped cargo tanks; it also includes ballast water or rainwater from these holds or cargo tanks

[SOURCE: CDNI, Article 5.01]

3.2.21
shipboard waste
waste (3.1.10) and sewage generated on board from the operation and maintenance of the *vessel* (3.1.9)

Note 1 to entry: This includes *oily and greasy waste* (3.2.11) and other *waste* (3.1.10) generated as a result of the operation of the vessel.

[SOURCE: UNECE Glossary for IWT, 2022, definition VIII.W.02, modified]

3.2.22
waste management plan
written procedures for collecting, storing, processing, and disposing of *waste* (3.1.10) on board *vessels* (3.1.9)

[SOURCE: MARPOL Convention, Annex V]

4 Requirements

4.1 General

This clause specifies the minimum requirements for waste treatment or management on board, including waste separation, marking, collecting, storing, and offloading to port reception stations.

While it is recognized that on board waste management should be standardized, it is noted that offloading procedures depend on the ports and reception stations available.

The national, regional and local requirements of waste management can differ for types of vessels, as sea-going vessels can also navigate on inland waterways. Some examples of such situations include where:

— local requirements are more stringent than the requirements of the MARPOL Convention;

— a competent authority introduces for inland waterways pollution control requirements which are more stringent than those applicable to seagoing vessels in specific cases where it is justified due to the ultimate use of the water (e.g. drinking water source);

— local requirements meet the requirements of the MARPOL Convention;

— local requirements are less stringent than requirements of the MARPOL Convention;

— local requirements are not established.

Both vessel owners and inland ports are more aware of the importance of well-organized and managed waste collection and its benefits, especially with respect to health and safety on board vessels, the prevention of pollution and the potential cost benefits for vessel owners and national or local governments.

The following should be considered in order to introduce and develop an efficient waste management system based on prevention, including:

a) regular monitoring of water quality;

b) regular monitoring of port areas;

c) regular inspections to ensure that all local, regional, and national rules and regulations for the prevention of pollution from vessels are complied with;

d) application of precautionary principles and preventative approach; and

e) application of advanced technologies and equipment to vessel waste disposal operations.

4.2 Classification of waste

The waste categories covered in this document are provided in Table 1.

NOTE For regional waste categories, relevant regulations can apply.

Table 1 — Categories and waste types

Type	Regional waste category
Plastics	Plastics are divided into clean plastic (not contaminated with chemicals, oil etc.) and non-clean plastic
Food waste (food leftover)	Combustible garbage
Domestic waste	Categorize depending on the nature of the waste
Slops	Sludge
Domestic wastewater	Combustible garbage
Sludge	Sludge/ fuel residue
Cargo residue (residual cargo, handling residues)	Categorize depending on the nature of the waste
Hazardous waste	Categorize depending on the nature of the waste
Other waste	Categorize depending on the nature of the waste
Glass (clear and coloured)	Glass
Paper products	In case of recyclable paper products, categorize as "recycling paper." In the case of non-recyclable paper products, categorize as "combustible garbage."
Non-recyclable household refuse	-
Oily and greasy waste	Combustible garbage
Wood	Combustible garbage
Metal	Non-combustible waste In case of metal cans, categorize according to the types listed in this table.
E-waste	E-waste

Waste that is contaminated by another category of waste shall be handled in accordance with the disposal requirements that are applicable for the most hazardous component of waste.

If the classification of waste in Table 1 does not meet the requirements of local regulatory documents, the types of waste can be grouped in such a way that the resulting groups of waste types meet the specified requirements. It is presupposed that the reception of waste from the vessel and its subsequent processing are carried out according to the requirements of local regulatory documents.

It is recommended that waste categories be colour coded to facilitate identification. Inexpensive and readily available standard label software and a colour printer can be useful for creating labels/markings, as shown in Table 1 and according to the colour scheme in Annex F, on board the vessel for collection and storage container labelling. Coloured signage/labels may be affixed to appropriate portable containers such as drums, boxing, or bagging for retention and storage on board. Furthermore, such a labelling scheme can

facilitate efficient segregation of waste by type/category, for further handling and recycling by reception station.

Additional or supplemental labels may be affixed to those types of waste requiring special handling, such as hazardous or harmful, quarantine, or medical wastes and incinerator ashes for vessels equipped with such equipment, as appropriate.

4.3 Collection and segregation of waste

4.3.1 General

Waste shall be regularly collected on board in the areas where it is generated. At the point of collection, the waste shall be appropriately segregated into types in accordance with Table 1. Mixing of hazardous and non-hazardous waste from different categories shall be avoided as far as practicable, depending on types of waste.

The waste shall be transported to storage containers in a storage site on board the vessel appropriate for the category (see Table 1), where it can be segregated further as necessary.

4.3.2 On board collection containers

Collection containers, waste baskets, cans or bags of suitable size, design, and number as appropriate for the volume and category of waste anticipated, shall be available where waste is generated, as far as practicable. The containers shall be stored in such a way as to facilitate the timely detection and repair of any leakage of the contents. The collection containers shall also comply with the applicable safety requirements (such as metal safety containers used for collection of oily rags or sealed/covered containers used for quarantine wastes) and shall be easy to transport manually. For hygiene reasons, the containers shall be emptied regularly. Collection containers shall be marked to clearly identify their use (see Table 1 for categories and Annex F for colours) as appropriate. Bilge water shall be collected in the engine room bilge.

4.4 Storage

4.4.1 General

Waste shall be regularly collected on board in the areas where it is generated. At the point of collection, the waste shall be appropriately segregated into types according to Table 1. Another type of grouping can be provided by local regulatory documents. The waste shall be transported to a storage site on board the vessel as appropriate for that category, where it may be segregated further, as necessary. Segregated waste shall not include any parts of the cargo or cargo-related waste.

Collected waste shall be appropriately stored on board until it is disposed.

NOTE International, regional and/or national legislation can apply.

The capacity of the designated storage site(s) shall be commensurate with the number and size of storage containers required to accommodate shipboard waste.

It is not permitted to introduce any waste or oil or grease dissolving or emulsifying cleaning agents into the engine room bilges.

4.4.2 Storage containers

4.4.2.1 General

Storage container volumes shall be commensurate with the amounts and categories of waste (see Table 1) anticipated based on factors such as vessel type, size, number of persons on board and sailing schedule. Storage containers may either be built into the vessel or movable, and shall be marked to clearly identify their use as appropriate. Examples of standardized marking/labelling and colours of storage containers by waste category are provided in Table 1 and Annex F, respectively.

4.4.2.2 Movable waste containers

Movable waste containers shall be fit for use based on the storage site, vessel type, and waste category.

a) The containers shall be leak-proof where appropriate and equipped with a suitable cover. Containers arranged on the deck shall be provided with securable covers.

b) The container shall be made of material that is suitable for and resistant to the contents of the waste type to be stored.

c) The use of combustible materials may be restricted; the containers shall be made of non-combustible material and resistant to oil and chemicals as appropriate to the material to be stored.

d) Manually handled containers shall be fit for use and easy to transport. Containers to be lifted manually shall not exceed a volume of 50 l or, depending on the density of the waste, a total mass of 25 kg. Larger containers shall be provided with rollers.

e) Containers provided with wheels and rollers shall be equipped with locking brakes or equivalent means of securing against accidental movement. Containers to be moved mechanically shall be provided with a safe means of transportation. They shall be designed so that they can be lifted safely and emptied by tilting or opening the bottom to ensure a safe and quick emptying.

f) Mobile containers stored on the deck shall not be used for the collection of used oil.

4.4.2.3 Containers built into the vessel

Containers built into the vessel, such as tanks and silos, shall be compatible with the type of waste stored.

4.4.2.4 Dedicated waste storage sites

The waste containers as described in 4.4.2.2 and 4.4.2.3 shall be located in dedicated waste storage sites.

4.4.2.5 General requirements of waste storage sites

The locations for waste storage on board shall meet the following requirements.

a) Access to the site shall be free from obstructions, as far as practicable.

b) The transport route to manually land the garbage or other waste to shore shall be free from thresholds, coamings, and other obstructions, as far as practicable.

c) A means for securing the storage containers and protection against roll or pitch shall be provided.

d) Storage sites, associated passageways, shafts and hatchways for vertical transports, and entrances shall be adequately sized for easy use, handling, and transport of storage containers.

e) Relevant fire protection equipment shall be provided at the storage sites.

f) For internal sites, ventilation with a forced exhaust and natural supply with at least five complete air exchanges per hour shall be provided.

g) A water connection shall be provided for wet cleaning.

h) Inside scuppers shall be provided with a strainer. Wash water and escaping liquids from inside spaces shall be directed to an appropriate waste liquid system.

i) Separate storage sites or rooms shall be considered for hazardous material storage. These spaces shall have drainage relevant to the material being stored and shall have an eyewash station for personnel in a readily accessible location.

4.4.2.6 Additional requirements for waste storage sites

Waste with potentially hazardous characteristics, garbage, and other wastes shall be stored on board only in suitable, appropriately sized containers. The containers shall be marked appropriately by a relevant recognized colour and/or sign depicting the waste it contains (see Annex F for an example). The waste storage site shall be equipped so as to minimize any potential hazards arising from the waste.

In addition to the basic outfitting detailed above, the waste storage site shall be equipped with the following:

a) suitable absorbent material for oil-containing waste or spillages of other liquid waste;

b) temporary storage in the event of broken containers, e.g. pans and barrels;

c) broom, shovel;

d) locks, locking strips, cargo netting or other suitable protection against sliding, tilting, leaking or falling of stored waste;

e) first aid kit;

f) sorting and handling procedures;

g) machinery and operating instructions; and

h) adequate lighting.

The installed outfitting of a waste storage site shall depend on the categories of waste stored, and the related hazards. Relevant criteria considered in selecting the outfitting shall be documented in the waste management plan.

4.4.2.7 Additional requirements for waste storage sites on deck

The following are additional requirements for waste storage sites on deck:

a) the storage site(s) shall be sheltered from the weather as much as practicable;

b) the deck storage site(s) shall be permanently marked and be of sufficient size to accommodate the waste containers;

c) the location of the waste storage site(s) shall be appropriately selected according to categories of waste to be stored, and located so as not to interfere with normal vessel operations; and

d) means for securing outside containers against movement shall be provided.

4.4.2.8 Storage of liquid waste

Liquid waste in larger quantities shall be stored in special tanks, containers (intermediate bulk containers or drums) or in slop or cargo tanks. Compatibility shall be considered, next to dangerous mixing of incompatible substances, for recycling or reuse of liquid waste.

Intermediate bulk containers or storage drums shall be clearly marked.

4.5 On board processing of waste

Segregated garbage and or other waste to be offloaded to reception stations shall not be treated, changed, or mixed in any manner that cross-contaminates and increases environmental damage and makes it impossible to recycle by shore facilities. Using equipment such as shredders, pulpers, and compactors to reduce the volume and make handling of solid wastes more efficient, can nevertheless make shore-side recycling more difficult, depending on the type of waste.

It is not permitted to burn waste on board. However, it is possible that the use of incinerators for household refuse is allowed on certain waterway sections and according to local regulations. In this case, when a vessel

passes a waterway section where it is not allowed, these installations shall be sealed. If the waste can be reused or recycled, the priority should be to not incinerate it.

4.6 Offloading waste

To ensure efficient offloading of wastes from vessels to reception stations, the following conditions shall be met.

a) Waste offloading operations shall be conducted in such a way that safe handling, movement of waste, and emptying of waste containers is possible in any normal loading condition of the vessel.

b) Waste offloading operations shall be conducted in such a way that manual handling of waste containers is minimised. Mechanical handling of waste containers is preferred. Equipment used for offloading waste shall have access to the storage site. If this is not possible for design reasons, manual horizontal transport greater than 10 m shall be avoided.

c) The procedures to offload waste shall consider the type and location of the reception station. They shall also take into account the specific port procedures for notifying and arranging for services.

d) Waste offloading shall be performed at a reception station.

e) If the station is not attended by personnel, the segregated waste shall be disposed by the crew of the vessel in the indicated and proper waste container.

f) If manned, and applicable, a waste receipt shall be obtained from the reception station noting the disposed types of waste and quantities.

Wastewater collection tanks shall have sufficient capacity. Tanks shall be fitted with a device to indicate their content level. There shall be on board pumps and pipes for emptying the wastewater collection tanks. It shall be possible to pass wastewater from both sides of the vessel and from other vessels onwards.

5 Waste management

5.1 Waste management plans

It is recommended that vessels have a waste management plan in accordance with the requirements applicable to the vessel. This document may also be used to develop a garbage (waste) management plan or instructions for the crew on inland vessels.

The vessel shall be managed, arranged, and equipped with the necessary facilities and resources to implement its waste management plan effectively. The waste management plan shall take into account:

a) an estimate of the waste volume,

b) the particulars of the voyage,

c) a review of potential waste management options,

d) the operation of the vessel,

e) the number of persons on board,

f) additional regulations and other relevant considerations, such as waste minimization (see 5.6).

The health and safety of passengers and crew, and protection of the environment shall be given priority when developing procedures and designing, constructing, and sourcing equipment used for the management of waste. Problems such as odours, liquid residue, unnecessary wastewater generation, health hazards and hygiene issues shall be considered and should be avoided by corresponding design measures. The basis of any decisions shall be appropriately documented in the waste management plan.

5.2 Waste volume

An estimate of the volume of waste shall be calculated using factors such as the number of persons on board, anticipated length of voyage, the application of minimization technology, and the type of vessel operational considerations. Examples can be found in Annex B. Estimated volumes should be updated as necessary.

5.3 Waste management techniques

5.3.1 General

Segregated waste shall be stored on board until a reception station is reached where it can be offloaded. Vessels shall maximize the segregation of waste (see Table A.1) to facilitate efficient recycling at the reception station. On board conditions such as space, waste amount, number of persons on board, equipment, particulars of the voyage, and route shall be taken into account and may allow for design of smaller capacity and alternative containers.

5.3.2 Discharge into the waterways

Inland vessels shall not discharge or allow to run into the waterways waste from vessels.

NOTE In many regions, it is not permitted to throw, discharge, or allow to run into the waterway oily or greasy waste generated from the operation of the vessel; slops, household refuse, sludge, or other special waste; or portions of the cargo or cargo-related waste. It is presupposed that operators consult with the appropriate regional regulations prior to discharging.

5.4 Facilities to offload waste

The arrangements and facilities provided on board shall be appropriately equipped, sized and planned to offload waste from the vessel to the reception station. Procedures shall be in accordance with the requirements in 4.6. The loading and unloading procedures shall ensure that the waste offloading operation and any set down areas are readily accessible and free from obstruction.

The pipes shall be fitted with a standard connection for the discharge of wastewater assemblies for the discharge of domestic wastewater to reception stations. Check with local regulation or reception stations if the proper connection is fitted. It should be ensured that connections are properly fitted.

5.5 Documentation

The quantities of wastes by category and disposal method shall be recorded in a waste record book (see examples in Annexes C and D). A crew member shall be designated responsible for the management of waste in accordance with the waste management plan.

A copy of the waste delivery receipts shall be retained on board with the waste record book for two years from the date of the last entry in the book. For the purposes of documentation, the types of hazardous wastes shall be recorded as the total quantity of the appropriate category of waste.

All vessels (excluding small crafts) whose main or auxiliary engines, with the exception of the engines of the anchor winches, are combustion engines, shall carry on board a valid garbage record book or a used-oil log (see the examples in Annex C). Following its renewal, the previous log shall be kept on board for at least 6 months after the last entry made. Exceptions are permissible only if consistent with the provisions on water protection and disposal of waste generated on board vessels in effect for the waterway concerned.

The oily and greasy waste generated from the operation of the vessel, slops and other special waste shall be delivered, against a receipt, to the reception stations at regular intervals, depending on the condition and operation of the vessel. It is also recorded in the oil record book or used-oil log by the reception station.

Any vessel carrying on board other documents concerning the deposit of waste generated from the operation of the vessel shall be able to prove by means of other documents that the waste has been deposited. Such proof may also be furnished by the oil record book as provided for by the MARPOL Convention.

It is presupposed that any vessel that has been unloaded has on board a valid attestation of unloading issued in compliance with local or national regulation. Examples of attestation of unloading can be found in Annex E. This attestation of unloading shall be kept on board for at least six months after its issue. Where this is a vessel without a crew, the attestation of unloading shall be kept by the carrier in a place other than on board.

5.6 Waste minimization

In accordance with the following principles, efforts shall be made to minimize the amount of waste produced on board the vessel:

a) reduction of the amount of waste generated;

b) its reuse of the generated waste (either for the same or a different purpose);

c) segregation for recycling or composting ashore.

Waste reduction methods with respect to quantity and quality shall be identified and implemented. This can include avoiding the generation of waste through the deliberate purchase of products that do not have excess packaging, are easily biodegradable and do not produce hazardous substances (e.g. toxic, corrosive or dangerous to the environment) when disposed or recycled. Information about the hazards of materials and products used on a vessel can be obtained from material safety data sheets and information on the packaging. These inform the user about the composition of the product, the hazards, environmental characteristics, and disposal options. From this information, decisions on the substitution of products generating less waste or environmental impact can be made.

Measures to minimize waste quantities can include:

— selecting suppliers whose products minimize waste;

— selecting of suppliers who provide a refill or replacement service for their product;

— returning old and out-of-date unused equipment (e.g. time-expired pyrotechnics and pharmaceuticals) to the manufacturers or sellers for reuse, recycling, or disposal as appropriate;

— removing excess packaging before loading;

— complete emptying of containers and full use of their contents;

— optimizing waste-producing processes to reduce waste;

— evaluating product-specific waste quantities to identify means to reduce waste;

— using products with long lifespans and/or shelf lives;

— using equipment that can be repaired;

— repairing rather than replacing equipment.

To optimize waste management on board, the crew shall be actively engaged in the process, as the success of any measures put in place depends to a large extent on their acceptance and implementation by the crew. Means to achieve effective crew involvement may include:

— definition and allocation of responsibilities;

— training of personnel;

— regular information briefings for all crew members.

Effective procedures shall include:

— a description of the reason for the procedure;

— the scope of the application (entire vessel or specific areas);

— naming responsible parties;

— a description of the waste management process (e.g. process chart);

— provisions for auditing and reassessment.

5.7 Waste management audits

The efficient implementation of a waste management plan requires auditing and quantification of waste. A regular assessment (at least once a year) of the waste record book provides an opportunity to analyse waste-related issues. An example is the identification of significant quantities of waste, the production of which can be assessed with the aim of reducing the amount and cost of waste disposal.

A well-prepared waste management plan serves as a basis for assessment. It is recommended that a waste data sheet be prepared for each category of waste as part of any audit. Such a data sheet should provide information about the area where this category of waste is produced, the source (e.g. packing), the waste characteristics, the disposal methods, disposal costs, and the disposal quantities.

An example of a data sheet can be found in Annex B.

The document summarizing the waste audit shall be in a form that can serve as a basis for the development of future waste minimization procedures and methods.

Annex A
(informative)

Examples of waste streams generated from vessels during operations

Table A.1 shows the recommended segregation, type of reception station and options for final waste management.

Table A.1 — Waste and management options

Waste type	Recommended segregation (where possible)	Recommended reception station (RS) (where possible)	Final recommended waste management option (where possible)
Paper and paper products	Segregate from general waste stream	Specific and separate waterproof RS	Recovery by recycling
Glass	Segregate from general waste stream	Specific and separate RS	Recovery by recycling
Metals	Segregate from general waste stream	Specific and separate RS	Recovery by recycling
Plastics	Segregate from general waste stream. Separate by different types.	Specific and separate RS	Recovery by recycling
Oily or contaminated rags	Segregate from the general waste stream	Specific and separate RS	Treat with the waste stream of its most hazardous component, e.g. oil, grease. Recovery by recycling.
Mixed domestic waste		Specific and separate RS	
Food waste	Segregate from the general waste stream	Specific and separate RS	Recovery by composting
Dunnage	Segregate from the general waste stream	Specific and separate RS	Recovery by recycling, reuse, or used as energy source
Hazardous waste, including but not limited to: — noxious liquids — batteries — aerosol/gas cans — paint — time expired pyrotechnics — fluorescent and other lightbulbs	All hazardous waste shall be kept separate and segregated from the general waste stream	Specific, separate, bundled, labelled and secure RS. It is important to ensure that the appropriate colour coding is used to avoid mixing wastes that can react together.	Recovery by recycling, reuse, or treatment as appropriate, or disposed of accordingly through incineration. At appropriate landfill sites only after treatment.

Table A.1 *(continued)*

Waste type	Recommended segregation (where possible)	Recommended reception station (RS) (where possible)	Final recommended waste management option (where possible)
Wastewater	Shall be kept separate from the general waste stream.	The waste shall be safely transported to an appropriate wastewater treatment facility. If it is proposed that the wastewater be discharged directly into the local wastewater treatment system in the port, then prior agreement with the appropriate authorities can be required.	Tertiary treatment at an appropriate wastewater treatment facility.
Cargo residues of any cargo material on board which remain on the deck or in holds or tanks following loading and unloading	Shall be kept separate in special drums, tanks or holds	The nature of the remnants will decide the proper disposal, but usually to a specialized reception station	Incineration or treatment at a treatment facility
Used oil	Segregate from general waste stream	Specific and separate RS	Recovery by recycling or reuse or disposal (incineration)
Oily mixtures including fuel residues	Segregate from general waste stream	Specific and separate RS	Recovery by recycling or reuse
Waste from air pollution emissions reduction equipment	Segregate from the general waste stream. The RS operator should liaise with the vessel's master to ascertain the nature of the waste stream	Specific and separate RS	Recovery by recycling, reuse or treatment or appropriate disposal
Waste from the removal or replacement of equipment on board the vessel	Segregate from general waste stream	Specific and separate RS	Recovery by recycling, reuse, or reclamation
Occasional wastes, including: — Sludges from vessel wastewater treatment plants — Chlorofluorocarbons (CFC), refrigerant gases, ozone depleting substances	Sludges from vessel wastewater treatment plants shall be kept separate in special sludge storage tanks	The waste shall be safely transported to an appropriate wastewater treatment facility	Co-treatment at an appropriate treatment facility

Annex B
(informative)

Example of a waste data sheet for use in waste auditing

Table B.1 shows an example of a waste data sheet which can be used in a waste auditing scheme or other recordkeeping situation.

Table B.1 — Example of a waste data sheet

Waste data sheet			
Category of waste			
Places of collection		Volumes	
Quantity and where collected		Disposal costs: (entry after each disposal) Disposal methods	
Avoidance suggestions		Quantity in kilograms per annum	
		Place of disposal (entry after each disposal)	

Annex C
(informative)

Example of a used-oil log

C.1 Issuance of used-oil logs

The first used-oil log, carrying order number 1 on page 1, shall be issued by a competent authority on presentation of a valid ship's certificate or another certificate recognized as its equivalent. This authority is also responsible for entering the required particulars on page 1. Table C.1 shows an example of a record of a used-oil log. Table C.2 provides an example of the types of accepted wastes in this category and how to account for what is transferred from the vessel.

All subsequent logs, which shall be numbered sequentially, shall be issued by a competent authority. However, they shall be issued only upon presentation of the previous log. The previous log shall be stamped indelibly with the words "not valid". Following its renewal, the previous log shall be kept on board for at least six months from the date of the last entry.

The examples of used-oil logs shown in this annex are taken from the European Code for Inland Waterways (CEVNI), 2021, Annex 9[8].

Table C.1 — Example of a used-oil log

Order No: _____

_____ _____

Type of vessel | Name of vessel

Unique European Vessel Identification Number or official number: _____

Place of issue: _____

Date of issue: _____

This log contains _____ pages.

Seal and signature of the authority issuing the log

_____

Table C.2 — Accepted oily and greasy waste generated from the operation of the vessel

Identifying number	Waste type	Source/location	Quantity
1.1	Used oil		l
1.2	Bilge water from:	Aft engine room	l
		Fore engine room	l
		Other premises	l
1.3	Other oily and greasy waste:	Used rags	kg
		Waste grease	kg
		Used filters	kg
		Receptacles	quantity
			quantity
2	Notes		
2.1	Unaccepted waste		
2.2	Other comments		
Place		Date	
Seal and signature of reception station			

Annex D
(informative)

Examples of oil and garbage record books as prescribed by the MARPOL Convention

D.1 Oil Record Book

D.1.1 General

An Oil Record Book Part I shall be provided to every oil tanker of 150 tons gross tonnage and above and every ship of 400 tons gross tonnage and above, other than oil tankers, to record relevant machinery space operations. For oil tankers, Oil Record Book Part II shall also be provided to record relevant cargo/ballast operations. Table D.1 provides an example of the front page of an Oil Record Book and information to be documented.

NOTE The content from Tables D.1 to D.3 is derived from the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL) Annex I, Appendix III[2].

Table D.1 — Example of the front page of an oil record book

OIL RECORD BOOK	
Name of ship	
Distinctive number or letters:	
Gross tonnage:	
Period from:	
To:	

D.1.2 Items to be recorded in the oil record book

Table D.2 provides the list (by code and item number) of fuels, oils and oily residues to be accounted for and entered into the Oil Record Book (See Table D.3).

Table D.2 — Codes and data to be collected for reporting purposes

Code	Description	Reporting unit
(A)	Ballasting or cleaning of fuel oil tanks	
1	Identity of tank(s) ballasted	
2	Whether cleaned since they last contained oil and, if not, type of oil previously carried	
3	Cleaning process:	
	1. position of ship and time at the start and completion of cleaning;	

[a] Quantities of oil residues (sludge) retained on board at the end of a voyage, but not more frequently than once a week. When ships are on short voyages, the quantity should be recorded weekly: this means that quantity shall be recorded once a week even if the voyage lasts more than one week.

[b] State quantity of oil residues disposed of, the tank(s) emptied and the quantity of contents retained in m^3.

[c] In case of discharge or disposal of bilge water from the holding tank(s), state the identity and capacity of holding tank(s) and the quantity retained in holding tank.

[d] ppm: parts per million, number of parts of oil per one million parts of water, expressed by volume (1 ppm equals to 1 µl of oil per 1 l of water).

Table D.2 *(continued)*

Code	Description	Reporting unit
	2. identify tank(s) in which one or another method has been employed (rinsing through, steaming, cleaning with chemicals; type and quantity of chemicals used, in m^3);	
	3. identity of tank(s) into which cleaning water was transferred and quantity in m^3.	
4	Ballasting:	
	1. position of ship and time at start and end of ballasting;	
	2. quantity of ballast if tanks are not cleaned, in m^3.	
(B)	Discharge of dirty ballast or cleaning water from oil fuel tanks referred to under (A)	
5	Identity of tank(s)	
6	Position of ship at start of discharge	
7	Position of ship on completion of discharge	
8	Ship's speed(s) during discharge	
9	Method of discharge:	
	1. through 15 ppm [d] equipment;	
	2. to reception facilities or station.	
10	Quantity discharged	
(C)	Collection and disposal of oil residues (sludge)	
11	Collection of oil residues[a]	
	1. identity of tank(s);	
	2. capacity of tank(s) m^3;	
	3. total quantity of retention m^3;	
	4. quantity of residue collected by manual operation m^3.	
12	Methods of disposal of oil residues (sludge)[b]	
	1. to reception facilities (identify port);	
	2. to another (other) tank(s) [indicate tank(s) and the total content of tank(s)];	
	3. incinerated (indicate total time of operation);	
	4. other method (state which).	
(D)	Non-automatic discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces	
13	Quantity discharged, transferred or disposed of, in m^3 [c]	
14	Time of discharge or disposal (start and stop)	
15	Method of discharge, transfer, or disposal:	
	1. through 15 ppm [d] equipment (state position at start and end);	
	2. to reception facilities (identify port);	
	3. to slop tank or holding tank (indicate tank(s); state quantity transferred and the total quantity retained in tank(s), in m^3.	
(E)	Automatic starting of discharge overboard, transfer or disposal otherwise of bilge water which has accumulated in machinery spaces	

[a] Quantities of oil residues (sludge) retained on board at the end of a voyage, but not more frequently than once a week. When ships are on short voyages, the quantity should be recorded weekly: this means that quantity shall be recorded once a week even if the voyage lasts more than one week.

[b] State quantity of oil residues disposed of, the tank(s) emptied and the quantity of contents retained in m^3.

[c] In case of discharge or disposal of bilge water from the holding tank(s), state the identity and capacity of holding tank(s) and the quantity retained in holding tank.

[d] ppm: parts per million, number of parts of oil per one million parts of water, expressed by volume (1 ppm equals to 1 µl of oil per 1 l of water).

Table D.2 *(continued)*

Code	Description	Reporting unit
16	Time and position of ship at which the system has been put into automatic mode of operation for discharge overboard through 15 ppm [d] equipment	
17	Time when the system has been put into automatic mode of operation for transfer of bilge water to holding tank (identify tank)	
18	Time when the system has been put into manual operation	
(F)	Condition of the oil filtering equipment	
19	Time of system failure NOTE The condition of the oil filtering equipment covers also the alarm and automatic stopping devices, if applicable.	
20	Time when system has been made operational	
21	Reasons for failure	
(G)	Accidental or other exceptional discharges of oil	
22	Time of occurrence	
23	Place or position of ship at time of occurrence	
24	Approximate quantity and type of oil	
25	Circumstances of discharge or escape, the reasons therefor and general remarks	
(H)	Bunkering of fuel or bulk lubricating oil	
26	Bunkering:	
	1. Place of bunkering;	
	2. Time of bunkering;	
	3. Type and quantity of fuel oil and identity of tank(s) [state quantity added and total content of tank(s)];	
	4. Type and quantity of lubricating oil and identity of tank(s) [state quantity added and total content of tank(s)].	
(I)	Additional operational procedures and general remarks	
	Name of ship	
	Distinctive number or letters	

[a] Quantities of oil residues (sludge) retained on board at the end of a voyage, but not more frequently than once a week. When ships are on short voyages, the quantity should be recorded weekly: this means that quantity shall be recorded once a week even if the voyage lasts more than one week.

[b] State quantity of oil residues disposed of, the tank(s) emptied and the quantity of contents retained in m^3.

[c] In case of discharge or disposal of bilge water from the holding tank(s), state the identity and capacity of holding tank(s) and the quantity retained in holding tank.

[d] ppm: parts per million, number of parts of oil per one million parts of water, expressed by volume (1 ppm equals to 1 µl of oil per 1 l of water).

Table D.3 — Data to be recorded in the oil record book

Date	Code (letter)	Item (number)	Record of operations/signature of officer in charge
Signature of the Master			

D.2 Garbage record book

D.2.1 General

As stated in the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL), Annex V, regulation 10,[2] a record is kept of each discharge operation or completed incineration. This includes discharges into the sea, to reception facilities, or to other ships, as well as the accidental loss of garbage.

D.2.2 Garbage and garbage management

Garbage includes 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 MARPOL. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.

The Guidelines for the Implementation of Annex V of MARPOL[17] should also be referred to for relevant information.

D.2.3 Description of garbage

Garbage shall be grouped into categories for the purposes of the Garbage Record Book (or ship's official log-book) as shown in Table D.4.

NOTE The content in Tables D.4 to D.6 is derived from the Appendix to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL) Annex V.[2].

Table D.4 — Categories of garbage for recordkeeping purposes

Garbage Category	Description
A	Plastics
B	Food wastes
C	Domestic wastes (e.g. paper products, rags, glass, metal, bottles, crockery)
D	Cooking oil
E	Incinerator ashes
F	Operational wastes
G	Cargo residues
H	Animal carcass(es)
I	Fishing gear

D.2.4 Entries to the garbage record book

Entries in the Garbage Record Book shall be made on each of the following occasions:

When garbage is discharged to a reception facility ashore or to other ships[1]:

— Date and time of discharge.

— Port or facility, or name of ship.

— Categories of garbage discharged.

— Estimated amount discharged for each category in cubic metres.

— Signature of officer in charge of the operation.

When garbage is incinerated:

— Date and time of start and stop of incineration.

— Position of the ship (latitude and longitude) at the start and stop of incineration.

— Categories of garbage incinerated.

— Estimated amount incinerated in cubic metres.

— Signature of the officer in charge of the operation.

When garbage is discharged into the sea according to MARPOL, Annex V, regulations 4, 5 or 6:

— Date and time of discharge.

— Position of the ship (latitude and longitude).

NOTE For cargo residue discharges, this includes discharge start and stop positions.

— Category of garbage discharged.

— Estimated amount discharged for each category in cubic metres.

— Signature of the officer in charge of the operation.

1) Ship's masters should obtain from the operator of the reception facilities, which includes barges and trucks, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates shall be kept together with the Garbage Record Book.

Accidental or other exceptional discharges or loss of garbage into the sea, including according to MARPOL, Annex V, regulation 7[2]:

— Date and time of occurrence.

— Port or position of the ship at time of occurrence (latitude, longitude and water depth if known).

— Categories of garbage discharged or lost.

— Estimated amount for each category in cubic metres.

— The reason for the discharge or loss and general remarks.

D.2.5 Amount of garbage

The amount of garbage on board should be estimated in cubic metres, if possible, separately according to category. The garbage record book contains many references to estimated amount of garbage. It is recognized that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimates differ before and after processing. It is possible that some processing procedures do not allow for a usable estimate of volume, e.g. the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

Table D.5 — Front form of garbage record book

GARBAGE RECORD BOOK		
Name of ship:		
Distinctive number or letters.		
IMO No.		
Period	From:	To:

Table D.6 — Record of garbage discharges

Date/ time	Position of the ship/ remarks (e.g. accidental loss)	Catego- ry	Estimated amount Discharged or incinerated (m^3)	To sea	To reception facility	Incineration (m^3)	Certification/ signature

Master's signature: _____ Date: _____

Annex E
(informative)

Examples of unloading attestations

E.1 General

A vessel shall be able to prove via documentation that wastes have been unloaded. An example of such documentation is a valid attestation of unloading issued in compliance with local or national regulation. Table E.1 provides an example of an attestation of unloading from dry shipping. Table E.2 contains further instructions on how to complete the attestation in Table E.1.

Table E.3 provides an example of an attestation of unloading from tanker shipping. Table E.4 contains further instructions on how to complete the attestation in Table E.3. Table E.5 contains the acceptable AVV code (6-digit) for the deposit of wash water (see Regulation EC no. 1013/2006)[18].

The examples of unloading attestations shown in this annex are taken from the Convention on the collection, deposit and reception of waste generated during navigation on the Rhine and other inland waterways (CDNI), 2022, Appendix IV[7].

Table E.1 — Example of an attestation of unloading from dry cargo shipping

Attestation of unloading (Dry shipping) [ ] Please only tick as appropriate **Part 1: Declaration by the consignee/handling facility**					
A. Name/Company:			**Address:**		
1. We unloaded from the vessel _____ (Name)			_____ (ENI)	_____ (Hold No.)	
2. _____ (Quantity)	[ ] t/ [ ] m^3		_____ Category and no. of goods according to App III to Implementing Regs		
3. Announced	(Date)	(Time)	4. Unloading commenced	(Date)	(Time)
5. Unloading completed: (Date)			(Time)		
B. Exclusive transport operations					
6. The vessel: a) [a] [ ] is carrying out exclusive transport operations – Article 7.04 (3) a). b) [ ] is carrying the following compatible cargo – Article 7.04 (3) b). c) [ ] will not be washed until a decision has been reached on the compatibility of the following cargo holds – Article 7.04 (3) c).					
C. Cleaning of the vessel					
7. Hold nos._____ were: a) [ ] handed over in a swept condition (unloading standard A by virtue of App III of Annex 2); b) [ ] handed over in a vacuum cleaned condition (unloading standard B by virtue of App III of Annex 2); c) [a] [ ] handed over in a washed condition.					
D. Receipt of handling residues/residual cargo					
8. a) [ ] handling residues received					
b) [ ] residual cargo from hold nos._____ have been received					
E. Wash water (including ballast water and rainwater)					
9. Wash water (including ballast water and rain water) in the holds referred to above, with the following quantity: ____ [ ] m^3 / [ ] l					

Table E.1 *(continued)*

a) [ ] may be discharged overboard into the surface in compliance with the provisions of App III of the implementing Regulation; b) [ ] has been received; c) [a] [ ] must be discharged at the following reception station _____ (Name/company) appointed by us; d) [a] [ ] must be deposited as stipulated in the transport contract.
F. Slops
10. [a] [ ] slops received, quantity _____ l / kg
G. Signature by consignee/ handling facility
_____ _____ _____ (Place) (Date, time) (Stamp/name in block capital letters and signature)
Part 2: Declaration by the boat master
11. Wash water (including ballast water and rain water) has been temporarily stored in: a) [ ] residue tank / wash water tank; quantity ____ [ ] m^3 / [ ] l b) [a] [ ] Hold; quantity _____ [ ] m^3 / [ ] l c) [ ] other residue containers, specifically: _____; quantity ____ [ ] m^3 / [ ] l
12. [ ] The information provided under nos. 1 to 10 is confirmed.
13. [ ] The following cargo being compatible, washing is foregone – Article 7.04 (3) c).
14. Remarks:
15. _____ _____ _____ (Place) (Date) (Stamp/name in block capital letters and signature)
Part 3: Declaration by the reception station for the wash water [only required if 9 c) or 9 d) are marked with a cross]
Name/company: Address:
Attestation of deposit
16. [ ] The deposit of wash water (including ballast water and rainwater) according to the quantities stated under point 9 and code [b] _____ is confirmed. Wash water, quantity: _____ [ ] m^3 / [ ] l
17. Remarks:
18. _____ _____ _____ (Place) (Date) (Stamp/name in block capital letters and signature)
Key ENI European Number of Identification [a] See note on this question in the Annex to the attestation of unloading for dry shipping in Table E.2. [b] Waste classification under Commission Decision 2014/955/EU of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council[19].