International Standard

ISO 16304

Ships and marine technology — Marine environment protection — Arrangement and management of port waste reception facilities

Navires et technologie maritime — Protection de l'environnement marin — Disposition et gestion des installations portuaires de collecte des déchets

Third edition
2026-10

Reference number
ISO 16304:2026(en)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO 16304:2018), which has been technically revised.

The main changes are as follows:

— 5.4 and Annex A: waste characteristics and waste streams and treatment have been aligned with the revisions of MARPOL.[1]

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.

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Introduction

The development of adequate port waste reception facilities (PRFs) for ship-generated waste and cargo residues is a major factor in the management of each of the shipboard waste streams covered by the International Convention for the Prevention of Pollution from Ships (MARPOL[1]) Annexes I to VI, as amended, excluding Annex III (packaged dangerous goods). MARPOL[1] requires the Parties to ensure the provision of adequate reception facilities in ports to receive these wastes. The Parties to MARPOL[1] are required to implement legislation to provide for PRFs. Regional and intergovernmental legislation has also been developed. However, due to operational, ownership, geographic and legislative differences in ports, there is a large disparity in how operations are conducted. To overcome some of the major issues, the International Maritime Organization (IMO), through its Sub-Committee on Implementation of IMO Instruments (III) [formerly the Sub-Committee on Flag State Implementation (FSI)] developed an action programme to tackle the inadequacy of PRFs. Then, IMO adopted MEPC.83(44) *Guidelines for Ensuring the Adequacy of Port Waste Reception Facilities*.[4]

To obtain the most efficient management of waste and to reduce the time and resource burden in segregating and handling waste in the ports, the concept of waste minimization has been integrated into this document by incorporating the following principles:

— for waste generated aboard a ship:

  “Prevention before recycling, before energy recovery, before disposal.”

— once the waste is offloaded ashore:

  “Avoidance before reduction, before reuse, before recycling, before incineration with energy recovery, before disposal”.

Ship owners and operators, cargo owners, and port and terminal owners and operators, along with governments are aware of the importance of well-organized and managed waste collection, especially with respect to health and safety on board ships and at ports and terminals. It has been acknowledged within the IMO that standardized methodologies for waste management both on board ships and ashore at PRFs would harmonize practices and ensure a smooth delivery of ship-generated waste and cargo residues to shore-side facilities. ISO 21070[5] provides a methodology for ships to segregate their garbage, thus, port waste reception facilities worldwide can expect a certain level of ship segregated waste and cargo residues. However, ISO 21070[5] cannot work alone and requires a parallel International Standard that covers the reception of ship-generated waste. This document assists in the planning for the provision of adequate PRFs.

Parties to MARPOL[1] are obligated as Port States to ensure that port waste reception facilities (PRFs) adequate to meet the needs of the ships using them without causing undue delay are provided at their ports and terminals. MARPOL[1] does not seek to regulate the management of ship-generated waste and cargo residues at ports and terminals beyond the reception facility requirement. The IMO recognizes the need to manage ship-generated waste and cargo residues at ports and terminals as part of an environmentally sound management approach for avoiding, minimizing and eliminating pollution from ships.

In consideration of the above, this document applies to the management of ship-generated waste and cargo residues regulated by MARPOL[1] that are discharged at ports and terminals. It also covers principles and issues that are expected to be considered in the development of a Port Waste Management Plan (PWMP), its implementation and PRF operations. The operation of any PRF is governed by the principles and procedures included in the PWMP. The procedures to operate the PRF and the development of a PWMP are closely linked and therefore integrated into this document.

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Ships and marine technology — Marine environment protection — Arrangement and management of port waste reception facilities

1 Scope

This document provides requirements and guidance on the provision, arrangement, operation, management, use and design of port waste reception facilities (PRFs). In doing so, it provides a method for addressing ship-generated waste, cargo residues and operational residues at ports when the waste and residues are offloaded from the ship.

This document addresses principles and issues on:

— the development of a port waste management strategy;

— the design and operation of PRF;

— PWMP development, implementation and compliance; and

— PRF management and accountability.

This document is designed to be used by ports and terminals with existing PRFs that aim to refine their systems. It can also be used by new ports and terminals that are developing PRFs. This document has been designed to be used by ports and terminals of any size. It does not give specifics on the size or location of a PRF in each port, but provides a list of principles to be considered and applied to any size of type of port or terminal (e.g. marina, fishing port, container terminal, oil terminal, roll on/roll off terminal, cruise terminal, ferry terminal, bulk or general cargo terminal, ship repair or recycling facility, and offshore terminal).

NOTE For inland ports and marinas and those ports that have entered regional arrangements for the provision of a PRF for inland operated vessels, refer to ISO 24146-2[8].

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
adequacy
quality which meets the needs of ships normally calling at the port by port waste reception facilities (PRFs) and does not provide ships with a disincentive to use PRFs, does not causing undue delays and contributes to the protection of the environment

Note 1 to entry: IMO MEPC.1/Circ. 834/Rev.1[3], gives a general description of term “adequacy”.

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3.2
cargo residues
remnants of any cargo material which are not covered by Annexes I, II, IV and VI of the MARPOL[1] Convention and which remain on the deck or in holds following loading or unloading, including loading and loading excess or spillage, whether in wet or dry conditions or entrained in wash water but not including cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship

Note 1 to entry: Dry bulk cargo residues include substances that are harmful to the marine environment (HME) with special restrictions for discharges including HME entrained in cargo hold wash water.

3.3
energy recovery
energy reclamation from waste

3.4
hazardous waste
waste which, due to its nature, physical, chemical or infectious properties, is potentially hazardous to human health

3.5
medical waste
solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biological materials, including but not limited to isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes and potentially contaminated laboratory wastes and dialysis wastes

Note 1 to entry: Medical waste is distinguished into two categories: infectious and non-infectious.

3.6
port
place of geographical area consisting of infrastructure and equipment as to permit, principally, the reception of all types of ships, including fishing vessels and recreational craft, for the loading or unloading of passengers, cargo, stores, equipment, fuel, fish from commercial or sport fishing, or for repairs or berthing or other related activities

3.7
port administration
public or private organization or partnership with the responsibility for the operation of the *port* (3.6)

3.8
port authority
organization, either private or governmental, that manages the operations of a *port* (3.6), in whole or part

Note 1 to entry: Port authorities can have complete or limited jurisdiction within a geographic region.

3.9
port waste reception facility
PRF
facility operating in, or provided by, a *port* (3.6) or *terminal* (3.15) which is fixed, floating or mobile, and is capable of receiving *ship-generated waste* (3.14) and *cargo residues* (3.2)

3.10
port waste management plan
PWMP
plan describing how to deal with waste that is unloaded from ships at a *port* (3.6)

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3.11
quarantine waste
solid or liquid waste that requires special handling, segregation and disposal due to its potential to spread disease, diseases, or plant and animal pests when discharged or delivered ashore

Note 1 to entry: Quarantine waste can also include food waste from galley operations and can be described as international catering waste.

3.12
recreational craft
boat or *ship* (3.13) of any type regardless of means of propulsion that is intended for non-commercial sport or leisure purposes

3.13
ship
vessel of any type whatsoever operating in the marine environment, including hydrofoil boats, air-cushion vehicles, submersibles, floating craft, and fixed or floating platforms

Note 1 to entry: Ships can call at inland ports.

[SOURCE: MARPOL,[1] Article 2]

3.14
ship-generated waste
waste, including sewage, and residues other than *cargo residues* (3.2), which are generated during the service of a *ship* (3.13) and fall under the scope of Annexes I, II, IV and VI to MARPOL[1] and operational waste as defined in Annex V to MARPOL[1]

3.15
terminal
specific and distinct cargo or passenger loading and unloading facility for *ships* (3.13)

3.16
waste recovery
recycling, reclamation or treatment of waste for reuse

4 Waste management strategy elements

4.1 General

There are three main components of waste management strategies:

— administrative and legal matters (4.2);

— technology (4.3); and

— infrastructure and support services (4.4).

4.2 Administrative and legal matters

Many states have implemented legislation, policies and national waste management strategies that govern the management of waste received at PRFs. Such legislation should be considered when developing a port waste management strategy, as it will assist in determining how local compliance can affect the operation of PRFs within a port. Additionally, there can be a need for either licensing or local approvals, or both, and the port or terminal operator should consider waste tracking and documentation.

The best possible environmental solution for waste recovery and disposal should be identified. Waste management targets adopted by the national administration for ports and terminals within its jurisdiction can be considered in the development of port waste management strategies. If there are no such targets, then the port or terminal operator can consider developing them.

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