

**THE INTERNATIONAL CONVENTION FOR THE
PREVENTION OF POLLUTION FROM SHIPS, 1973,
MODIFIED BY THE PROTOCOL OF 1978
(MARPOL 73/78)**

MARPOL covers all types of marine pollution violations, from misdemeanors to felonies. Each day a violation continues is considered a separate violation, so it behooves masters to ensure their crews are fully versed on the requirements of MARPOL. Persons giving information that leads to convictions and fines against violators may be entitled to up to half of the fines collected. Some annexes have designated special areas of the world where either no discharges are allowed or the restrictions on discharge are stricter than the annexes' basic provisions. MARPOL is composed of five annexes. These provisions are codified throughout the CFR's and are not found as one coherent regulation.

Annex I—Regulations for the Prevention of Pollution by Oil

Special areas for Annex I listed in 33 CFR §15.1.13 include areas of the Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, Gulf of Aden, and Antarctic area.

The particulars for compliance with Annex I can be found in 33 CFR § 151.10. This section includes information on oily-water separators, maximum oil concentrations of overboard discharges, and the requirements of maintaining an Oil Record Book. Additionally, shipboard oil pollution emergency plans are outlined. Requirements for International Oil Pollution Prevention Certificates (IOPPs) can be found in 33 CFR § 151.19 and information of Shipboard Oil Pollution Emergency Plans (SOPEPs) is found in 33 CFR §151.26.

**Annex II—Regulations for the Control of
Noxious Liquid Substances in Bulk**

Special areas for Annex II listed in 33 CFR §151.32 include areas of the Baltic Sea, the Black Sea, and Antarctic areas. Annex II is codified in 33 CFR §15.1.30 et seq. This section lists applicability and certificates needed to carry various noxious liquid substances (NLS). It outlines the procedure for obtaining an attachment to an IOPP certificate for the carriage of NLS.

**Annex III—Regulations for the Prevention of Pollution by
Harmful Substances Carried by Sea in Packaged Forms, or in
Freight Containers or Portable Tanks**

MARPOL Annex III is codified primarily in 49 CFR §171.

**Annex IV—Regulations for the Prevention of Pollution
by Sewage from Ships**

These requirements are addressed by sections of the FWPCA (33 USC §1322) and are found in 33 CFR §159 and the EPA regulations of 40 CFR §140.3—4.

**Annex V—Regulations for the Prevention of Pollution
by Garbage from Ships**

Special areas for Annex V listed in 33 CFR §151.53 include areas of the Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, Gulf areas, North Sea, Antarctic area, wider Caribbean region, and Gulf of Mexico.

This annex is codified in 33 CFR §151.51 et seq. and includes information on record keeping requirements, waste management plans, placards, and inspection and reporting requirements.

No person may discharge garbage into the navigable waters of the United States. Plastic or garbage mixed with plastic may never be discharged into the sea or navigable waters of the United States.

Vessels must maintain a waste management plan and a log. Masters should endeavor to keep all records of garbage discharged ashore.

Discharge requirements and distances off the nearest land are as follows:

1. Plastics can never be discharged; they may be held aboard or incinerated.

2. Dunnage, lining, and packing materials that float must be discharged at least 25 miles from the nearest land.
3. Victual wastes and all other wastes including paper products, rags, glass, metal, bottles, and crockery must be discharged at least 12 miles from the nearest land. If the material has passed through a grinder it may be discharged outside a 3-mile distance from land.
4. Mixtures of garbage having different requirements must be retained aboard or discharged in accordance with the strictest applicable requirements.

TITLE 33--PART 151_VESSELS CARRYING OIL, NOXIOUS LIQUID SUBSTANCES, GARBAGE, MUNICIPAL OR COMMERCIAL WASTE, AND BALLAST WATER.

Subpart A Implementation of MARPOL 73/78 and the Protocol on Environmental Protection to the Antarctic Treaty as it Pertains to Pollution from Ships

Sec. 151.57 Waste management plans.

(a) This section applies to the following:

- (1) Each manned oceangoing ship (other than a fixed or floating platform) of 40 feet or more in length that is documented under the laws of the United States or numbered by a state and that either is engaged in commerce or is equipped with a galley and berthing.
- (2) Each manned fixed or floating platform that is--
 - (i) Documented under the laws of the United States; or
 - (ii) Operating under the authority of the United States, including, but not limited to, a lease or permit issued by an agency of the United States.

(b) The master or person in charge of a ship under paragraphs (a)(1) and (a)(2) of this section shall ensure that the ship is not operated unless a waste management plan meeting paragraph (c) of this section is on the ship and that each person handling garbage follows the plan.

(c) Each waste management plan under paragraph (b) of this section must be in writing and--

- (1) Provide for the discharge of garbage by means that meet Annex V of MARPOL 73/78, the Act, and Sec. 151.51 through 151.77;
- (2) Describe procedures for collecting, processing, storing, and discharging garbage;
- (3) Designate the person who is in charge of carrying out the plan.

Sec. 151.59 Placards.

(a) This section applies to the following:

- (1) Each manned U.S. ship (other than a fixed or floating platform) that is 26 feet or more in length.
- (2) Each manned floating platform in transit that is--
 - (i) Documented under the laws of the United States; or
 - (ii) Operating under the authority of the United States, including, but not limited to, a lease or permit issued by an agency of the United States.

(b) The master or person in charge of each ship under paragraph (a)(1) or (a)(2) of this section shall ensure that one or more placards meeting the requirements of this section are displayed in prominent locations and in sufficient numbers so that they can be read by the crew and passengers. These locations must be readily accessible to the intended reader and may include embarkation points, food service facilities, garbage handling spaces, and common spaces on deck. If the Captain of the Port determines that the number or location of the placards is insufficient to adequately inform crew and passengers, the Captain of the Port may require additional placards and may specify their locations.

- (c) Each placard must be at least nine inches wide by four inches high, made of a durable material, and lettered with letters at least 1/8 inch high.
- (d) Except as under paragraph (e) of this section, the placard must notify the reader of the following:
 - (1) The discharge of plastic or garbage mixed with plastic into any waters is prohibited.
 - (2) The discharge of all garbage is prohibited in the navigable waters of the United States and, in all other waters, within three nautical miles of the nearest land.
 - (3) The discharge of dunnage, lining, and packing materials that float is prohibited within 25 nautical miles of the nearest land.
 - (4) Other unground garbage may be discharged beyond 12 nautical miles from the nearest land.
 - (5) Other garbage ground to less than one inch may be discharged beyond three nautical miles of the nearest land.
 - (6) A person who violates the above requirements is liable for a civil penalty for each violation, and the criminal penalties of a class D felony. Placards installed on vessels before May 7, 1997, need not be replaced; and existing stocks of placards, containing previous language, may be used. When language on a placard is inconsistent with the language in the Code of Federal Regulations (CFR) due to use of a placard containing previous language penalty amounts contained in the CFR are controlling.
 - (7) Regional, State, and local restrictions on garbage discharges also may apply.

(e) For ships while operating on the Great Lakes or their connecting or tributary waters, the placard must--

- (1) Notify the reader of the information in paragraph (d) of this section; or
- (2) Notify the reader of the following:
 - (i) The discharge of all garbage into the Great Lakes or their connecting or tributary waters is prohibited.
 - (ii) A person who violates the above requirements is liable for a civil penalty for each violation, and the criminal penalties of a class D felony. Placards installed on vessels before May 7, 1997, need not be replaced; and existing stocks of placards, containing previous language, may be used. When language on a placard is inconsistent with the language in the Code of Federal Regulations (CFR) due to use of a placard containing previous language, penalty amounts contained in the CFR are controlling.

Sec. 151.61 Inspection for compliance and enforcement.

While within the navigable waters of the United States or the Exclusive Economic Zone, a ship is subject to inspection by the Coast Guard or other authorized federal agency to determine if--

- a) The ship has been operating in accordance with these regulations and has not discharged plastics or other garbage in violation of the provisions of the Act or Annex V of MARPOL 73/78;
- (b) Grinders or comminuters used for the discharge of garbage between 3 and 12 nautical miles from nearest land are capable of reducing the size of garbage so that it will pass through a screen with openings no greater than 25 millimeters (one inch);
- (c) Information for recordkeeping requirements, when required under Sec. 151.55, is properly and accurately logged;
- (d) A waste management plan, when required under Sec. 151.57, is on board and that the condition of the ship, equipment and operational procedures of the ship meet the plan; and
- (e) Placards, when required by Sec. 151.59, are posted on board.

Sec. 151.63 Shipboard control of garbage.

- (a) The master, operator, or person who is in charge of a ship shall ensure that all garbage is discharged ashore or in accordance with Sec. Sec. 151.66-151.73.
- (b) The following factors, among others, may be considered by enforcement personnel in evaluating compliance with Sec. Sec. 151.51 through 151.77:
 - (1) Records, including receipts, of garbage discharges at port reception facilities.
 - (2) Records under Sec. 151.55 or log entries of garbage discharges.
 - (3) The presence and operability of equipment to treat ship-generated garbage, including, but not limited to, incinerators, grinders, or comminuters.
 - (4) The presence of and adherence to a written shipboard waste management plan.
 - (5) The absence of plastics in ship stores.
 - (6) Ongoing educational programs to train shipboard personnel of garbage handling procedures and the need for these.
 - (7) The presence of shipboard spaces used for collecting, processing, storing and discharging ship-generated garbage.
- (c) The master, operator, or person who is in charge of a ship shall ensure that if garbage is transported from a ship by shipboard personnel, it is properly deposited into a port or terminal's reception facility.

Sec. 151.55 Recordkeeping requirements.

- (a) This section applies to the following:
 - (1) Every manned oceangoing ship (other than a fixed or floating platform) of 400 gross tons and above that is engaged in commerce and that is documented under the laws of the United States or numbered by a State.
 - (2) Every manned fixed or floating platform subject to the jurisdiction of the United States.
 - (3) Every manned ship that is certified to carry 15 passengers or more engaged in international voyages.
- (b) The master or person in charge of each ship under paragraph (a)(1), (a)(2), or (a)(3) of this section shall ensure that a written record is maintained on the ship of each of the following garbage discharge or disposal operations:
 - (1) Discharge overboard.
 - (2) Discharge to another ship.
 - (3) Discharge to a reception facility.
 - (4) Incineration on the ship.
- (c) The record under paragraph (b) of this section must contain the following information on each discharge or disposal operation:
 - (1) The type of operation as described under paragraphs (b)(1) through (b)(4) of this section.
 - (2) The date and time of the operation.
 - (3) If the operation was conducted at a port, the name of the port.
 - (4) If the operation was not conducted at a port, the latitude and longitude of the location where the operation was conducted and the estimated distance of that location from shore. If the operation involved off-loading to another ship, the identity of the receiving ship by name and official number.
 - (5) The amount of garbage involved, described by volume in cubic meters.
 - (6) For discharges into the sea, a description of the contents of the garbage, described by the following categories:
 - (i) Plastic material.
 - (ii) Floating dunnage, lining, or packing material.

- (iii) Ground paper products, rags, glass, metal, bottles, crockery, or other similar garbage.
- (iv) Unground paper products, rags, glass, metal, bottles, crockery, or other similar garbage.
- (v) Victual wastes.
- (vi) Incinerated ash.
- (vii) Incinerated plastic residue.

- (d) The record under paragraph (b) of this section must be prepared at the time of the operation, certified as correct by the master or person in charge of the ship, maintained on the ship for two years following the operation, and made available for inspection by the Coast Guard.

Sec. 151.65 Reporting requirements.

The master or person who is in charge of each oceangoing ship shall notify the port or terminal, at least 24 hours before entering the port or terminal, of the name of the ship and the estimated volume of garbage requiring disposal, if any of the following types of garbage are to be discharged:

- (a) Garbage regulated by the Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture under 7 CFR 330.400 or 9 CFR 94.5.
- (b) Medical wastes.
- (c) Hazardous wastes defined in 40 CFR 261.3.

Sec. 151.66 Operating requirements: Discharge of garbage in the navigable waters prohibited.

No person on board any ship may discharge garbage into the navigable waters of the United States. Note: The navigable waters are defined in Sec. 2.05-25 of this chapter.

Sec. 151.67 Operating requirements: Discharge of plastic prohibited.

No person on board any ship may discharge into the sea, or into the navigable waters of the United States, plastic or garbage mixed with plastic, including, but not limited to, synthetic ropes, synthetic fishing nets, and plastic garbage bags. All garbage containing plastics requiring disposal must be discharged ashore or incinerated.

Sec. 151.69 Operating requirements: Discharge of garbage outside special areas.

(a) When operating outside of a special area specified in Sec. 151.53, no person may discharge, into the sea, garbage that is separated from plastic, if the distance from nearest land is less than--

- (1) 25 nautical miles for dunnage, lining and packing materials that float; or
- (2) 12 nautical miles for victual wastes and all other garbage including paper products, rags, glass, metal, bottles, crockery and similar refuse, except that, such garbage may be discharged outside of three nautical miles from nearest land after it has been passed through a grinder or comminuter specified in Sec. 151.75.

(b) Mixtures of garbage having different discharge requirements under paragraph (a)(1) or (a)(2) of this section must be--

- (1) Retained on board for later disposal ashore; or
- (2) Discharged in accordance with the more stringent requirement prescribed by paragraph (a)(1) or (a)(2) of this section.

Sec. 151.69 Operating requirements: Discharge of garbage outside special areas.

(a) When operating outside of a special area specified in Sec. 151.53, no person may discharge, into the sea, garbage that is separated from plastic, if the distance from nearest land is less than--

- (1) 25 nautical miles for dunnage, lining and packing materials that float; or
- (2) 12 nautical miles for victual wastes and all other garbage including paper products, rags, glass, metal, bottles, crockery and similar refuse, except that, such garbage may be discharged outside of three nautical miles from nearest land after it has been passed through a grinder or comminuter specified in Sec. 151.75.

(b) Mixtures of garbage having different discharge requirements under paragraph (a)(1) or (a)(2) of this section must be--

- (1) Retained on board for later disposal ashore; or
- (2) Discharged in accordance with the more stringent requirement prescribed by paragraph (a)(1) or (a)(2) of this section.

Sec. 151.71 Operating requirements: Discharge of garbage within special areas.

(a) When a ship is located in a special area referenced in Sec. 151.53 of this part, no person may discharge garbage from the ship, except as allowed in paragraph (b) or (c) in this section.

(b) Except as provided in paragraph (c) of this section, disposal into the sea of victual waste must be made as far as practicable from land but, in any case, not less than 12 nautical miles from the nearest land.

(c) Disposal into the Wider Caribbean region of victual wastes which have been passed through a comminuter or grinder shall be made as far as practicable from land but, in any case, not less than 3 nautical miles from the nearest land. Such comminuted or ground food wastes shall be capable of passing through a screen with opening no greater than 25 millimeters.

Sec. 151.75 Grinders or comminuters.

Each grinder or comminuter used to discharge garbage in accordance with Sec. 151.69(a)(2) or Sec. 151.73(b)(1), must be capable of processing garbage so that it passes through a screen with openings no greater than 25 millimeters (one inch).

Sec. 151.77 Exceptions for emergencies.

Sections 151.67, 151.69 and 151.71 do not apply to the following:

- (a) Discharges of garbage from a ship for the purpose of securing the safety of the ship and those on board or saving life at sea.
- (b) The escape of garbage resulting from damage to a ship or its equipment, if all reasonable precautions have been taken before and after the occurrence of the damage, to prevent or minimize the escape.
- (c) The accidental loss of synthetic fishing nets, provided all reasonable precautions have been taken to prevent such loss.

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA (SOLAS) AND INTERNATIONAL SAFETY MANAGEMENT CODE (ISM)

In 1994 the ISM Code became chapter 9 of the SOLAS Convention and compliance is now mandatory for signatory nations. The ISM Code has thirteen parts:

1. Introduction and General Explanation
2. Safety and Environmental Protection Policy
3. Company Responsibilities and Authority
4. Designated Persons
5. Master's Responsibility and Authority
6. Resources and Personnel
7. Development of Plans for Shipboard Operations
8. Emergency Preparedness
9. Reports and Analysis of Non-Conformities, Accidents, and Hazardous Occurrences
10. Maintenance of the Ship and Equipment
11. Documentation
12. Company Verification, Review, and Evaluation
13. Certification, Review, and Control

The STCW, as yet, does not apply to seafarers aboard warships, vessels owned or operated by a signatory nation, fishing vessels, or pleasure yachts. Unlike the United States system of licensing (for officers) and certification (for unlicensed crew), the STCW code divides officers and crew into three levels:

1. Management level: master, chief mate, chief engineer, and first assistant engineer (called second engineer by Europeans)
2. Operational level: officers in charge of a navigational or engineering watch, designated duty engineers in unmanned engine rooms, and radio officers. This would be the equivalent of U.S. second and third mates and engineers.
3. Support level: crew performing tasks under the supervision of persons at the operational or management level, the equivalent of U.S. unlicensed crewmembers

Also, to bring certification standards in line with the International Tonnage Convention, standards in the deck department will be based on 500 and 3,000 gross tons, instead of 200 and 1,600 gross tons. Engineering licenses will be based on main propulsion machinery power thresholds of 750 kilowatt and 3,000 kilowatt.

INTERNATIONAL LABOR ORGANIZATION (ILO)

Founded in 1919, the International Labor Organization (ILO) is now a part of the United Nations. This organization issues recommendations that are often adopted and incorporated into law by port states.⁵ U.S. flag ships and foreign ships operating in U.S. waters must comply with various ILO recommendations such as the following:

1. Safety standards, competency of officers and crew, work conditions, hours of work, and manning levels
2. Workers' rights
3. Benzene level thresholds
4. Repatriation of mariners
5. Conditions of employment and shipboard living conditions
6. Safety of women at sea
7. Other recommendations affecting the safety and welfare of mariners