



**REGULATIONS ON VESSELS OWNED OR OPERATED BY THE  
DEPARTMENT OF DEFENSE**

January 2005  
Under Secretary of Defense for  
Acquisition, Technology and Logistics

## FOREWORD

This Regulation is authorized by DoD Instruction 4715.6, "Environmental Compliance," April 24, 1996 (reference (a)). This Regulation implements Section 312(d) of the Clean Water Act (Section 1322 of title 33, United States Code (U.S.C.) (reference (b)) by issuing standards governing the design, construction, installation, and operation of marine sanitation devices (MSDs) in public vessels owned or operated by the Department of Defense. This regulation also implements Annex I of the 1973 International Convention for the Prevention of Pollution From Ships, including the 1978 Protocol thereto (MARPOL Protocol) (reference (c)), in accordance with the requirements of Section 3(g) of the Act to Prevent Pollution from Ships (Section 1902(g) of title 33, U.S.C. (reference (d)), by prescribing standards under which warships, naval auxiliaries and other public vessels owned or operated by the Department of Defense shall prevent oil pollution.

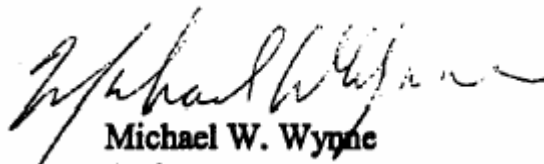
This Regulation applies to the Office of the Secretary of Defense (OSD), the Military Departments, the Chairman of the Joint Chiefs of Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities in the Department of Defense (hereafter referred to collectively as the "DoD Components"). The term "Military Services," as used herein, refers to the Army, the Navy, the Air Force, and the Marine Corps. This Regulation excludes those DoD Components that do not own or operate public vessels and do not have shore facilities that service DoD vessels or other authorized ships or vessels.

This Regulation is effective immediately and is mandatory for use by all the DoD Components.

Send recommended changes to this Regulation to:

Deputy Under Secretary of Defense (Installations and Environment)  
Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics  
3400 Defense Pentagon  
Washington, D.C. 20301-3400

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Acting Under Secretary of Defense  
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## REFERENCES

- (a) DoD Instruction 4715.6, “Environmental Compliance,” April 24, 1996
- (b) Section 1322 of title 33, United States Code, “Marine Sanitation Devices”
- (c) Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships (“the MARPOL Protocol”), as amended<sup>1</sup>
- (d) Sections 1901-1915 of title 33, United States Code, “Prevention of Pollution From Ships”
- (e) Title 40, Code of Federal Regulations, Part 140, current edition
- (f) Title 33, Code of Federal Regulations, Parts 151, 155, 157, and 159, current edition
- (g) Standard Methods for the Examination of Water and Wastewaters, 20th ed., 1998<sup>2</sup>
- (h) Title 46, Code of Federal Regulations, Part 162, “Engineering Equipment; Design and Approval Requirements for Oil Pollution Prevention Equipment,” current edition

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<sup>1</sup> Available from the International Maritime Organization, 4 Albert Embankment, London DE1 7SR, United Kingdom

<sup>2</sup> Available from the American Public Health Association, 1015 15th Street, Suite 300, N.W, Washington, D.C. 20005

AL1. ABBREVIATIONS AND/OR ACRONYMS

AL1.1.1.	<u>CFR</u>	Code of Federal Regulations
AL1.1.2.	<u>DoD</u>	Department of Defense
AL1.1.3.	<u>DoT</u>	Department of Transportation
AL1.1.4.	<u>EPA</u>	Environmental Protection Agency
AL1.1.5.	<u>IMO</u>	International Maritime Organization
AL1.1.6.	<u>mm</u>	Millimeters
AL1.1.7.	<u>MSD</u>	Marine Sanitation Device
AL1.1.8.	<u>nm</u>	Nautical Miles
AL1.1.9.	<u>OCM</u>	Oil Content Monitor
AL1.1.10.	<u>OWHT</u>	Oily Waste Holding Tank
AL1.1.11.	<u>OWS</u>	Oil/Water Separator
AL1.1.12.	<u>ppm</u>	Parts Per Million
AL1.1.13.	<u>SCP</u>	Spill Contingency Plan
AL1.1.14.	<u>SWOB</u>	Ship Waste Offload Barges
AL1.1.15.	<u>T&amp;E</u>	Testing and Evaluation
AL1.1.16.	<u>U.S.C.</u>	United States Code
AL1.1.17.	<u>USCG</u>	United States Coast Guard
AL1.1.18.	<u>WOT</u>	Waste Oil Tank

## C1. CHAPTER 1

### MARINE SANITATION DEVICES (MSDs)

#### C1.1. PURPOSE

This Regulation implements Section 312 of the Federal Water Pollution Control Act (reference (b)). It administers policies and prescribes procedures governing the design, construction, installation, and operation of MSDs and procedures for certifying that such devices are consistent with Environmental Protection Agency (EPA) standards prescribed in Title 40, Code of Federal Regulations (CFR), Part 140 (reference (e)).

#### C1.2. SCOPE

The conditions of this chapter apply to all DoD vessels (hereafter referred to as “vessels”) that have installed toilet facilities and are owned or operated by the DoD Components.

#### C1.3. EXEMPTIONS

C1.3.1. Under Section 1322(d) of (reference (b), the Secretary of Defense has decided that, at certain times and under certain circumstances, compliance with Chapter 1 of this Regulation for certain vessels would excessively and unreasonably detract from their military characteristics, effectiveness, or safety to not be in the interest of national security. Consequently, the following vessels are exempt from the standards of this chapter:

C1.3.1.1. Vessels transiting the navigable waters and territorial seas of the United States that are, either because of their design or because of equipment failure, incapable of holding total vessel-generated sewage onboard for later discharge on the high seas or at pierside sewage collection facilities. The discharge of vessel-generated sewage into U.S. navigable waters and territorial seas shall occur as far from land as possible and shall be limited without endangering the health, safety, or welfare of the crew or other personnel aboard.

C1.3.1.2. Vessels conducting or taking part in military operations and exercises (including training and readiness exercises and operations) within U.S. navigable waters and territorial seas when holding total vessel-generated sewage on board such vessels would either interfere with operational effectiveness or pose a threat to the health, safety, or welfare of the crew or other personnel aboard.



C1.3.1.3. Vessels anchored or moored within U.S. navigable waters and territorial seas where sewage reception facilities or services are not readily available, or where use of such facilities or services is not practical because of heavy weather, poor visibility, or unsafe conditions and holding vessel-generated sewage on board would either interfere with operational effectiveness or pose a threat to the health, safety, or welfare of the crew or other personnel aboard.

C1.3.1.4. Vessels being repaired or overhauled where the operation of the MSD may interfere significantly with such repair or overhaul or otherwise pose a threat to the health, safety, or welfare of the crew or other personnel aboard.

C1.3.2. Commanding officers and/or vessel masters of vessels exempt under the conditions of this section shall nonetheless limit discharge of vessel-generated sewage into U.S. navigable waters, territorial seas, and EPA delineated “No Discharge Zones” designated under the Clean Water Act (reference (b)) to the maximum extent practicable without endangering the health, safety, or welfare of the crew or other personnel aboard.

C1.3.3. Requests for individual vessel or class exemptions to this Regulation for the reasons cited below shall be addressed to the Deputy Under Secretary of Defense (Installations and Environment) if the vessel faces:

C1.3.3.1. Potential inactivation.

C1.3.3.2. Unique operating circumstances.

C1.3.3.3. The physical inability to comply.

C1.3.3.4. Retrofitting that is cost-prohibitive

#### C1.4. GENERAL REQUIREMENTS

##### C1.4.1. Policy

C1.4.1.1. MSDs shall be designed, operated, and maintained to prevent the overboard discharge of untreated or inadequately treated sewage into U.S. navigable waters, territorial seas, and EPA No Discharge Zones, as designated under reference (b) except as provided in section C1.3. Before operating or maintaining sewage disposal or transfer equipment, personnel shall be trained in the proper procedures, including hookup and transfer of sewage to shore facilities.

C1.4.1.2. Existing vessels with Type I MSDs installed on or before January 31, 1978, comply with this Regulation if the device meets design performance standards, as defined in

reference (e). Type I or II MSDs that become inoperable and require removal shall be replaced with certified Type II or III MSDs.

C1.4.1.3. All new vessels equipped with toilet facilities shall have the U.S. Coast Guard (USCG)- or the DoD Component-certified Type II or Type III MSDs and shall have the capability for pumping collected or treated sewage and collected graywater to appropriate shoreside reception facilities.

C1.4.1.4. In freshwater lakes (excluding the Great Lakes), freshwater reservoirs, or other freshwater impoundments whose inlets or outlets prevent vessels that the Department of Defense owns or operates from entering or leaving, or in rivers incapable of interstate navigation, vessels may not discharge treated or untreated sewage. MSDs on vessels that operate in these waters shall be designed or modified and operated to prevent accidental discharge into such waters.

C1.4.1.5. When in port, vessels with Type III-A and Type III-B MSDs shall collect all shipboard sewage and graywater for transfer to proper shoreside reception facilities.

C1.4.1.6. Used solvents or other industrial wastes shall be packaged for disposal ashore, not piped to MSDs or dumped down sinks or deck drains.

C1.4.1.7. Vessels equipped with Type III-A and Type III-B MSDs capable of segregating sewage and graywater shall be configured to collect only sewage while operating within the territorial seas of the United States. Collecting graywater while transiting the territorial seas significantly reduces tank-holding capacity and may result in the unnecessary overboard discharge of sewage before reaching pierside facilities or unrestricted waters.

#### C1.4.2. Procedures

C1.4.2.1. The DoD Components shall use USCG approval and certification requirements (see the Department of Transportation (DoT) and the USCG Directives found in Title 33, CFR, Part 159 (reference (f)), or shall develop their own requirements which may be more stringent than USCG requirements.

C1.4.2.2. MSD manufacturers shall follow certification procedures outlined in section C1.6.

#### C1.4.3. Responsibilities

C1.4.3.1. The Deputy Under Secretary of Defense (Installations and Environment) shall check compliance with the conditions of this Regulation and shall approve or disapprove requests for additional exemptions from the conditions of this Regulation.

C1.4.3.2. The Heads of the DoD Components shall comply with the policy and procedures prescribed herein. The Heads of the DoD Components shall designate a Technical Authority to evaluate and approve systems and equipment for installation on vessels, and administer DoD certification of MSDs.

## C1.5. CERTIFICATION REQUIREMENTS

DoD certification of each Type II and Type III MSD shall meet the certification requirements of Part 159 of reference (f), and the DoD Component specified technical and performance requirements.

## C1.6. CERTIFICATION PROCEDURES

C1.6.1. Selection of MSD. In response to a Government request for a proposal, each manufacturer shall submit a technical description of the MSD that shall include the following for review by the cognizant DoD Component(s):

C1.6.1.1. System concept and schematics.

C1.6.1.2. Design capacity.

C1.6.1.3. Weight and physical dimensions.

C1.6.1.4. Components and construction materials.

C1.6.1.5. Materials and chemicals required for operation.

C1.6.1.6. Power requirements.

C1.6.1.7. Staffing requirements.

C1.6.1.8. Performance data.

C1.6.1.9. Drawings, technical manuals, reliability and maintainability test plans, failure modes and effects analysis, and maintenance and engineering analysis.

C1.6.1.10. Copies of USCG MSD Certifications for identical or similar MSD systems.

### C1.6.2. Laboratory Evaluation

C1.6.2.1. An EPA certified laboratory shall test and evaluate any Type II or Type III-A MSD, at the manufacturer's expense, before the design is submitted to the Department of Defense for review. This laboratory testing shall demonstrate the ability of the system to meet the requirements of Part 159 of reference (f) and any additional DoD Component specified performance requirements. At the discretion of the DoD Component, for vessels where large capacity MSDs are being procured, this laboratory evaluation may be conducted on fully functional scaled-down MSDs.

C1.6.2.2. The cognizant DoD Component Technical Authority shall then conduct a technical review of the MSD design and all laboratory testing and evaluation (T&E) data.

C1.6.2.3. Once the manufacturer laboratory evaluation and the DoD Component Technical Authority review are complete, the manufacturer shall submit a fully functional Type II or Type III-A MSD to a DoD-designated laboratory for technical evaluation to verify that it meets the following additional requirements:

C1.6.2.3.1. MSDs shall meet:

C1.6.2.3.1.1. The DoD Component specified technical, performance, and integration requirements.

C1.6.2.3.1.2. The requirements of applicable DoD Component Safety Instructions.

C1.6.2.3.1.3. The requirements of applicable DoD Component Medical Instructions. A health hazard assessment shall also be conducted before certifying any MSD design for shipboard operations.

C1.6.2.3.2. Type-II MSDs shall meet the fecal coliform bacteria, visible floating solids, and suspended solids performance criteria contained in Part 159 of reference (f) and defined in subparagraph AP1.2.7.2.

C1.6.2.3.3. Incinerator-type MSDs shall meet the EPA air pollution requirements for incinerators.

C1.6.2.4. The DoD-designated laboratory shall submit a report of such T&E to the cognizant DoD Component Technical Authority.

C1.6.2.5. The cognizant DoD Component Technical Authority shall then review the laboratory report and ensure that the device meets the design, construction, and performance standards of this section.

C1.6.2.6. Based on the results of the laboratory evaluation, the DoD Component Technical Authority shall decide whether the MSD performance is in accordance with all requirements and is capable of meeting all DoD Certification requirements when installed.

#### C1.6.3. Vessel T&E

C1.6.3.1. If the DoD Component Technical Authority review of laboratory T&E concludes that further data is needed to decide if the MSD meets design, construction, and performance standards, the device may be installed aboard a vessel for operational T&E.

C1.6.3.2. Operational T&E shall verify that the device meets the conditions of Part 159 of reference (f), and the cognizant DoD Component specified technical and performance requirements while treating vessel-generated sewage.

C1.6.3.3. The MSD shall be loaded to its design capacity with vessel-generated sewage and operated according to the manufacturer's manual of instructions. For flow-through devices (Type II MSDs), the influent must contain fecal matter.

C1.6.3.4. Four effluent samples a day, taken at peak usage periods, shall be collected from the steady state operating MSD for 10 consecutive days.

C1.6.3.5. A certified laboratory shall analyze the samples for fecal coliform, visible floating solids, and total suspended solids to find whether Type II MSDs comply with the performance criteria in Part 159 of reference (f) and defined in subparagraph AP1.2.7.2. and the DoD Component specified performance requirements.

C1.6.3.6. All testing methodology shall be in accordance with the DoT and the USCG Directives including Part 159 of reference (f), and Standard Methods for the Examination of Water and Wastewaters (reference (g)).

C1.6.3.7. Based on the results of the vessel T&E, the DoD Component Technical Authority shall decide whether the MSD performance is in accordance with all requirements and is capable of meeting all DoD Certification requirements when installed.

#### C1.6.4. Type III-B MSD Evaluation

C1.6.4.1. Manufacturer and DoD Component laboratory T&E of Type III-B MSDs is not required and shall only be performed at the discretion of the DoD Component.

C1.6.4.2. For Type III-B MSDs, the DoD Component Technical Authority may evaluate the ability of the MSD to meet DoD Certification and other performance requirements based on the data provided by the manufacturer, in accordance with paragraph C1.6.1.

C1.6.5. Individual Vessel DoD Certification Testing. Each vessel MSD installation shall be certified by the DoD Component Technical Authority to meet the requirements of Part 159 of reference (f) and those defined in subparagraph AP1.2.7.3.2. or to meet more stringent DoD Component specified performance requirements.

C1.6.5.1. Before final DoD Component Technical Authority Certification of individual vessels equipped with a Type II or Type III-A MSD, at a minimum, the device shall be tested to verify the MSD treats ship-generated sewage at design capacity to the requirements of Part 159 of reference (f), or to more stringent DoD Component specified performance requirements. The individual vessel testing shall be conducted in accordance with the requirements of subparagraph C1.6.3.

C1.6.5.2. Before final DoD Component Technical Authority certification of individual vessels equipped with a Type III-B MSD, the installation shall be tested to verify the MSD meets the requirements of Part 159 of reference (f), or more stringent performance requirements, as specified by the cognizant DoD Component.

## C2. CHAPTER 2

### OIL POLLUTION PREVENTION

#### C2.1. PURPOSE

This Regulation implements the conditions of Section 1902(g) of reference (d) which requires the heads of the Federal Departments and Agencies to prescribe standards to prevent pollution from ships for which they are responsible.

#### C2.2. SCOPE

C2.2.1. The conditions of this chapter apply to all DoD ships (hereafter referred to as “ships”) that the Department of Defense owns or operates, if their construction and equipment include equal protection against oil pollution, assuming due regard to the service for which the ship is intended.

C2.2.2. The conditions of this chapter do not apply to hydrofoils, air-cushion vehicles, and submarines, if the construction and equipment of such excepted public vessels include equal protection against oil pollution, assuming due regard to the service for which the public vessel is intended.

C2.2.3. This chapter also applies to DoD Shore Facilities receiving DoD or other authorized ships.

C2.2.4. The conditions of this chapter set standards (so far as reasonable and practicable) that are consistent with Annex I of reference (c), in accordance with Section 1902(g) of reference (d) to prevent oil pollution by ships.

#### C2.3. EXEMPTIONS

The Deputy Under Secretary of Defense (Installations and Environment) shall approve any exemption from the conditions of this chapter.

C2.3.1. Exemption may be sought where, by complying, certain ships may deviate from their military characteristics, effectiveness, and system integrity in a manner that is not in the interest of national security.

C2.3.2. Exemption from these conditions may also be sought for shore facilities in which full compliance is not practical due to infrequent use by ships, expected near term deactivation of a facility, or other provable conditions.

C2.3.3. Exemption from the conditions of this chapter also may be necessary at certain times and under certain circumstances during the operation of a normally non-exempt ship. Examples of authorized exemptions include ships:

C2.3.3.1. With inoperable shipboard oily waste processing equipment due to equipment malfunction while operating in waters beyond 50 nautical miles (nm) from the nearest land. In this case, a ship may discharge oily bilge water directly into the marine environment when it is underway if holding such water on board poses a safety hazard, and only if all reasonable efforts have been made to repair the equipment malfunction and commanding officers and/or ship masters ensure that discharges are reduced. The details of such a discharge (nature, quantity, and geographic location) shall be noted in the ship's Engineering Log.

C2.3.3.2. That are in any other situation in which a commanding officer and/or ship master requires a discharge of shipboard oily wastes to ensure the safety of the crew or ship, or to prevent machinery damage (e.g., oily bilge water shall not be allowed to reach levels that threaten to cause chloride contamination of shipboard condensate systems). Commanding officers and/or ship masters shall ensure that discharges are reduced and that details of the discharge (nature, quantity, and geographic location) are duly noted in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.3.3.3. That are unable to collect and transfer such waste for processing through the shipboard Oil/Water Separator (OWS) system while operating in waters beyond 50 nm from the nearest land. In this case, a ship may discharge oily waste containing only distillate (non-persistent) oils from isolated spaces, such as JP-5 pump rooms, directly overboard (see subparagraph C2.6.1.4.). Such discharges shall result in minimal quantities of oily waste being discharged.

## C2.4. GENERAL REQUIREMENTS

### C2.4.1. Policy

C2.4.1.1. Reference (d) requires the Heads of the Federal Departments and Agencies to prescribe standards ensuring that ships under their control operate in a manner consistent with reference (c), so far as is reasonable and practicable without impairing the operations or operational capabilities of such ships.

C2.4.1.2. DoD ships shall comply with the standards presented in sections C2.5. through C2.8. to ensure that they operate with due regard to recognized international standards for environmental protection, while not detracting unreasonably from their mission to protect national interest.



C2.4.1.3. The standards presented in section C2.5. shall apply to the operation of ships as specified for each type and size of ship.

C2.4.1.4. The standards presented in section C2.6. shall apply both to the construction of new ships and to the installation of pollution abatement equipment aboard new and existing ships. Comparable fittings, materials, appliances, or apparatus may be fitted in a ship as an alternative to those required by the standards, if they are at least as effective as those so required. Operational methods may be substituted for a design or equipment requirement.

C2.4.1.5. The cognizant DoD Component shall inspect and certify each oiler and oil tanker of at least 150 metric tons (gross tonnage) and all other ships of at least 400 metric tons (gross tonnage) according to procedures described in sections C2.7. and C2.8. Inspections that the USCG completes at the request of the cognizant DoD Component are acceptable to meet this requirement.

C2.4.1.6. DoD shore facilities, such as oil loading terminals, shall comply with regulations under Section 6 of reference (c), establishing criteria for the adequacy of reception facilities for ports or terminals unless a specific exception is granted, as provided in section C2.3. The shore facility shall have oil transfer hose adapters to allow connection with the standard flange specified by the International Maritime Organization (IMO) and described in Appendix 3 so foreign military ships may discharge their oily residues and mixtures when calling at DoD facilities.

C2.4.1.7. Personnel shall be trained in the proper procedures for connecting and disconnecting systems to other ships and shore facilities, transferring oil or oily waste, maintaining transfer equipment (including the OWS and associated equipment), and responding to oil spills before they may do or supervise these operations.

C2.4.1.8. All DoD oilers and oil tankers of at least 150 metric tons (gross tonnage), and all other DoD ships of at least 400 metric tons (gross tonnage) shall develop and maintain a written oil Spill Contingency Plan (SCP). The SCP shall have procedures for reporting, containment, control, recovery, and disposal of spilled materials. Since Section 151 of reference (f) does not apply to DoD ships, neither the USCG nor State officials may require the preparation of DoD ship SCPs. The Department of Defense shall provide DoD ship SCPs to the USCG and State officials on request.

#### C2.4.2. Responsibilities

C2.4.2.1. The Deputy Under Secretary of Defense (Installations and Environment) shall:

C2.4.2.1.1. Check the amendment process of reference (c), which the IMO implemented, and update the corresponding DoD Regulations to ensure that ships operate

consistent with reference (c) so far as is reasonable and practicable without impairing the operations or operational capabilities of such ships.

C2.4.2.1.2. Approve exemptions for those ships that properly fall within the policy conditions of paragraph C2.2.2. and section C2.3.

C2.4.2.2. The Heads of the DoD Components shall prepare and issue implementing standards consistent with the stated policy of this chapter.

C2.4.2.3. The Secretaries of the Military Departments shall ensure compliance with the standards prescribed in this chapter by:

C2.4.2.3.1. Programming, budgeting, and accounting for funds necessary to install appropriate pollution abatement equipment aboard existing ships and at port facilities under their command.

C2.4.2.3.2. Developing, procuring, and installing appropriate pollution abatement equipment applicable to existing ships and port facilities under their command.

C2.4.2.3.3. Using the standards of this chapter in all specifications for new ship and ship design, development, and procurement, as well as for new port facility installations.

C2.4.2.3.4. Updating appropriate operational regulations applicable to ship commanders and/or ship masters, specifying proper pollution abatement procedures for ships under their command.

## C2.5. OPERATIONAL STANDARDS

### C2.5.1. Ships

#### C2.5.1.1. Introduction

C2.5.1.1.1. The operational standards in this paragraph are described for each of the possible sources of shipboard oily discharges, and accommodate various combinations of shipboard oil pollution control equipment. Additional standards applicable only to oilers and to oil tankers owned or operated by the DoD Components are provided in paragraph C2.5.2. Operational standards in Parts 155 and 157 of reference (f) may be followed instead of the standards below.

C2.5.1.1.2. Ships that operate on the high seas or in MARPOL Annex I Special Areas shall adhere to the operational standards listed in paragraph C2.5.2. to limit the discharge of oil and oily waste into the world's seas.

C2.5.1.1.3. Discharges, regardless of oil content, that produce a sheen are prohibited within the territorial seas (0-3 nm) and contiguous zone (3-12 nm) of the United States. Ships operating in these waters may process bilge water and discharge the effluent wastewater. Under normal operating conditions this practice should not produce a sheen. If a sheen occurs, pumping must halt unless required for the safety of the ship. An investigation of the cause shall be made and the problem corrected, if possible. All sheen-producing discharges shall be recorded in the ship's Engineering and Deck Logs and shall be reported to the USCG National Response Center and the appropriate military authority, as required by law and command directives.

C2.5.1.1.4. Chemical agents that promote chemical emulsion of oil shall not be intentionally introduced to bilge water, oily waste holding tanks (OWHTs), waste oil tanks (WOTs), fuel tanks, or ballast tanks.

#### C2.5.1.2. Oily Wastes and Waste Oils

##### C2.5.1.2.1. Machinery Space Bilge Water Discharges

###### C2.5.1.2.1.1. With Both OWS Systems and Oil Content Monitors (OCMs)

C2.5.1.2.1.1.1. Ships equipped with approved OWS systems and OCMs, as specified in section C2.6., shall operate such equipment for processing bilge water before it is discharged overboard.

C2.5.1.2.1.1.2. The OCM alarm shall start when the oil content of the OWS effluent exceeds 15 parts per million (ppm). When the alarm starts, the OWS effluent shall be routed back to the bilge or to an OWHT. When the OCM shows that the effluent oil content has returned to 15 ppm or less, the overboard discharge of effluent shall be allowed.

C2.5.1.2.1.1.3. If the OCM or its alarm becomes inoperable, ships shall process bilge water according to the procedures in subparagraph C2.5.1.2.1.2.

C2.5.1.2.1.1.4. While in port, ships may use their OWS systems whenever applicable standards, port regulations, and staffing requirements allow. Where there are adequate shore reception facilities and OWS effluent is not allowed to be discharged to receiving waters, oily bilge water shall be held or pumped ashore for treatment.

###### C2.5.1.2.1.2. With OWS Systems but Without OCMs

C2.5.1.2.1.2.1. Ships with approved OWS systems, as specified in section C2.6., shall use them to process all machinery-space bilge water before discharging overboard. OWS systems shall routinely produce an output of no more than 15 ppm if operating properly and if the oily waste does not contain detergents, emulsifying agents, or solid waste that may

clog the separator plates. The separated oil shall be stored in shipboard WOTs until it may be offloaded safely ashore.

C2.5.1.2.1.2.2. While in port, ships may use their OWS systems whenever applicable standards, port regulations, and staffing requirements allow. Where there are adequate shore reception facilities and OWS effluent is not allowed to be discharged to receiving waters, oily bilge water shall be held or pumped ashore for treatment.

C2.5.1.2.1.2.3. In port, oily bilge water that contains chemical emulsion agents shall be discharged to appropriate shore receiving facilities.

C2.5.1.2.1.2.4. Ships with inoperable OWS systems and with OWHTs shall transfer bilge water to the OWHTs for eventual processing, as described in subparagraph C2.5.1.2.2. Ships with no OWHTs shall refer to the procedures in subparagraph C2.5.1.2.1.3.2. Where shore oil waste collection lines are not available, ships with an inoperable OWS system shall use the ship waste offload barge (SWOB) system to collect and handle oils and oily wastes. The SWOB shall be operated by the supporting shore activity in accordance with Title 46, CFR, Part 162 (reference (h)).

#### C2.5.1.2.1.3. Without OWS Systems

C2.5.1.2.1.3.1. Ships with an OWHT but no OWS systems shall direct oily bilge water to the OWHT for shore disposal when practicable.

C2.5.1.2.1.3.2. Ships with neither an OWS system nor an OWHT shall hold all oily bilge water for shore disposal to the maximum extent possible without impairing operational effectiveness or endangering the health, safety, or welfare of the ship and crew. If operating conditions require, oily bilge water shall be discharged at sea at least 50 nm from the nearest land and only while the ship is underway. If compliance with this limitation should adversely influence the ship's ability to carry out its mission, the discharge should occur as far from land as mission limits allow. Commanding officers and/or ship masters shall reduce such discharges and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.1.2.1.3.3. Eductors shall be used to dewater bilges containing oily waste only when OWHTs are not available or are insufficient to handle immediate flow requirements.

C2.5.1.2.1.3.4. Non-oily bilge water (such as collected water that stays segregated from oil-contaminated sections of the bilge) may be discharged directly overboard.

#### C2.5.1.2.2. OWHT Discharges

C2.5.1.2.2.1. With Both OWS Systems and OCMs. Ships with approved OWS systems and OCMs, as specified in section C2.6., shall follow the same procedures for processing OWHT contents as are described in subparagraph C2.5.1.2.1.1. for processing machinery space bilge water.

C2.5.1.2.2.2. With OWS Systems but Without OCMs

C2.5.1.2.2.2.1. All ships with approved OWS systems, as specified in section C2.6., shall process the contents of shipboard OWHTs in the same manner as described in subparagraph C2.5.1.2.1.2. for machinery space bilge water.

C2.5.1.2.2.2.2. When shipboard OWS systems are inoperable, the contents of the OWHT shall be held for eventual shore disposal. If operating conditions require, oily bilge water shall be discharged at sea at least 50 nm from the nearest land and only while the ship is underway. If compliance with this limitation may adversely influence the ship's ability to carry out its mission, the discharge should occur as far from land as mission limits allow. Commanding officers and/or ship masters shall reduce such discharges and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.1.2.2.3. Without OWS Systems. Ships with no or inoperable OWS systems shall, when possible, hold tank contents for shore disposal. If operating conditions require the disposal of oily bilge water at sea, it shall be made at least 50 nm from the nearest land and only while the ship is underway. If compliance with this limitation would adversely influence the ship's ability to carry out its mission, the discharge should occur as far from land as mission limits allow. Commanding officers and/or ship masters shall ensure minimal discharges occur and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.1.2.3. WOTs

C2.5.1.2.3.1. Shipboard WOTs shall hold separated oil from OWS systems and OWHTs, and waste oil from other ship processes.

C2.5.1.2.3.1.1. Used lubricating oils shall be collected, stored, and labeled for eventual shore reclamation.

C2.5.1.2.3.1.2. Lubricating oils shall not be purposely disposed into the bilge, OWHTs, or WOTs.

C2.5.1.2.3.1.3. Synthetic lubricating oils and hydraulic oils shall also be collected separately from other used and/or waste oils.

C2.5.1.2.3.1.4. Containers in which oil products were originally packaged shall be held and properly labeled for storing and transferring oil ashore.

C2.5.1.2.3.2. Fuel tank strippings shall not be discharged to WOTs (see subparagraph C2.5.1.2.4.1.1.).

C2.5.1.2.3.3. The contents of WOTs shall only be discharged to proper shore reception facilities including SWOBs, pierside collection tanks, tank trucks, and contaminated fuel barges.

#### C2.5.1.2.4. Fuel Tanks

##### C2.5.1.2.4.1. Fuel Tank Strippings

C2.5.1.2.4.1.1. Ships with fuel tank stripping systems shall discharge the strippings only to available holding tanks that store contents for appropriate processing or discharge ashore, such as contaminated fuel settling tanks, or other special fuel oil reclamation tanks (see subparagraph C2.5.1.2.5.). Strippings shall not be discharged overboard.

C2.5.1.2.4.1.2. Eductors shall not be used to strip fuel or cargo tanks.

##### C2.5.1.2.4.2. Fuel Tank Deballasting

C2.5.1.2.4.2.1. Combatants with compensated fuel ballast systems shall reduce oil discharges to the marine environment. They may discharge compensated fuel ballast water during refueling operations at sea; however, while in port, these ships shall follow local port guidance on discharge or collection of compensated fuel ballast water.

C2.5.1.2.4.2.2. Other ships that must carry ballast water in fuel oil tanks may discharge ballast only to appropriate shoreside reception facilities. If compliance with this limitation adversely influences the ship's ability to carry out its mission, discharge shall occur as far from land as mission limits allow, and only while the ship is underway. Commanding officers and/or ship masters shall ensure minimal discharge occurs and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.1.2.4.2.3. Ships with approved OCMs, as specified in section C2.6., installed in the ballast water discharge piping shall check oil concentrations, not to exceed 15 ppm oil to water, when discharging fuel tank ballast to the marine environment.

C2.5.1.2.4.2.4. Ships without approved OCMs installed in the ballast water discharge piping shall not discharge fuel tank ballast water when operating within MARPOL Special Areas or within 50 nm of the nearest land. If compliance with this limitation adversely influences the ship's ability to carry out its mission, discharge shall occur as far from land as mission limits allow and only while the ship is underway. Commanding officers and/or ship masters shall ensure minimal discharge and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.1.2.5. Fuel Oil Reclamation Tanks. Ships with special tanks for reclaiming fuel oil from shipboard fuel tank and cargo tank strippings (see subparagraph C2.5.1.2.4.) shall not discharge the separated water directly overboard. Such water shall either be transferred to an OWHT or processed by an OWS system, according to procedures described in subparagraph C2.5.1.2.4.2. While in port, ships so equipped shall observe local port guidance on the discharge of fuel oil reclamation tanks.

C2.5.1.2.6. Shipboard Record Keeping for Oily Waste Discharge

C2.5.1.2.6.1. Exemption from oily waste discharge restrictions may be necessary at certain times and under certain circumstances, as described in section C2.3. Commanding officers and/or ship masters shall ensure any discharge of oily waste under these exemptions is reduced. The following events shall be recorded in the ship's Engineering Log:

C2.5.1.2.6.1.1. Any discharge of oily waste from bilges, fuel tanks, or OWHTs that is not processed through an OWS.

C2.5.1.2.6.1.2. Any discharge that exceeds 15 ppm oil to water, as registered by an OCM.

C2.5.1.2.6.1.3. The breakdown or malfunction of OWS or OCM equipment.

C2.5.1.2.6.2. The details of every oily waste discharge shall be recorded in a ship's Engineering Log and shall include:

C2.5.1.2.6.2.1. The date, time, and nature of the occurrence.

C2.5.1.2.6.2.2. An estimate of the quantity discharged.

C2.5.1.2.6.2.3. The latitude and longitude of the ship at the start and finish of the discharge.

C2.5.1.2.6.3. Equipment malfunctions that either threaten or result in a discharge of oily water shall be reported to the cognizant civil and military authority, as specified by the Heads of the DoD Components. The initial report shall note the potential for discharge, and all later status reports shall note the frequency and approximate amount discharged.

C2.5.1.2.6.4. An oil record book maintained in accordance with Part 151 of reference (f) may be kept instead of the foregoing record keeping requirements.

C2.5.1.2.7. Oil Spill and/or Release Reporting Requirements. All discharges that produce a sheen are prohibited within the territorial seas (0-3 nm) and contiguous zone (3-12 nm) of the United States and shall be reported to the USCG National Response Center and the appropriate military authority as required by law and command directives.

C2.5.1.3. Fuel Oil Transfers. Fueling, de-fueling, internal fuel transfer, and oil offloading operations in restricted waters shall occur during normal daylight working hours where schedules allow, and shall be conducted by personnel that have completed Service training and qualification requirements. The ship's officer responsible for the fuel oil transfer (hereafter referred to as the "Responsible Ship's Officer") shall observe the following precautions to reduce oil spills:

C2.5.1.3.1. Maintain topside watches at likely spill locations.

C2.5.1.3.2. Maintain direct communication with fuel transfer pump stations.

C2.5.1.3.3. Establish check-off lists and procedures for valve alignment and transfer operations.

C2.5.1.3.4. Double-check all transfer system valves.

C2.5.1.3.5. Ensure that all participating personnel are trained and qualified to complete the detailed transfer procedure.

C2.5.1.3.6. Ensure that, before actual fuel transfer, transfer personnel advise both the Responsible Ship's Officer and the fuel supplier that the ship is ready to begin fueling operations.

C2.5.1.3.7. Continuously check each tank level during fueling operations.

C2.5.1.3.8. Use remote tank level indicators as the primary method of checking tank levels.

## C2.5.2. Oilers and Oil Tankers



C2.5.2.1. The operational standards in this paragraph apply to oilers and oil tankers and supplement the operational standards specified for ships in paragraph C2.5.1. More than one of these standards, which vary depending on the source of discharge, may apply to an individual oiler or oil tanker. Equipment standards required to satisfy operational requirements specified in this paragraph are in section C2.6.

C2.5.2.2. Segregated Ballast Tanks

C2.5.2.2.1. Ballast water on ships configured with segregated ballast tanks shall not be introduced to cargo tanks. Clean and oil-free ballast may be discharged directly to the marine environment.

C2.5.2.2.2. In extreme weather or emergency conditions, ballast water may be carried in cargo tanks to ensure the safety of the ship and shall be processed according to subparagraph C2.5.2.3.

C2.5.2.3. Cargo Tanks, Fuel Tanks, and OWHTs

C2.5.2.3.1. Oilers and oil tankers with tank cleaning systems shall hold tank washings for disposal ashore or transfer them to an OWHT for appropriate processing rather than discharging them directly into the marine environment. On existing ships, any cargo tank may be designated as an OWHT.

C2.5.2.3.2. When reasonable, oilers and oil tankers shall not discharge cargo tank ballast, fuel tank ballast, or OWHT contents when operating within MARPOL Special Areas or within 50 nm of the nearest land unless compliance with this limitation would adversely influence the ship's ability to carry out its mission. In such case, discharge shall occur as far from land as mission limits allow and only while the ship is underway. Commanding officers and/or ship masters shall ensure minimal discharge and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If such a discharge is required within 12 nm of the United States and its territories, it shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.2.3.3. When outside MARPOL Special Areas and beyond 50 nm from the nearest land, oilers and oil tankers shall hold cargo tank ballast, fuel tank ballast, and OWHT contents for discharge to a shore reception facility. If operating conditions make it necessary to dispose of cargo tank or fuel tank ballast water at sea, discharge shall occur as far from land as possible, be kept to a minimum, and be made only under the following conditions:

C2.5.2.3.3.1. The instantaneous rate of oil content discharge shall not exceed 30 liters per nm.

C2.5.2.3.3.2. The ship shall be proceeding en route.

C2.5.2.3.3.3. For existing ships, the total quantity of discharged oil shall not exceed 1/15,000 of the total quantity of the cargo including the discharge. For new ships, the total quantity of discharged oil shall not exceed 1/30,000 of the total quantity of the cargo, including the discharge.

C2.5.2.3.3.4. A USCG-approved oil cargo monitor and control system specified under Part 157 of reference (f) shall be in operation.

C2.5.2.3.4. Oilers and oil tankers without a USCG-approved oil cargo monitor and control system shall hold cargo tank ballast, fuel tank ballast, and OWHT contents on board for discharge to a shore reception facility. If operating conditions require discharge of cargo tank or fuel tank ballast water at sea, it shall occur as far from land as possible, be kept to a minimum, and be made only under the following conditions:

C2.5.2.3.4.1. Discharge must be at least 50 nm from the nearest land. Commanding officers and/or ship masters shall ensure minimal discharge and duly note the details (nature, quantity, and geographic location) in the ship's Engineering Log. If required within 12 nm of the United States and its territories, such discharge shall be treated as an oil and hazardous substance spill and immediately reported to the USCG National Response Center and the cognizant military authorities.

C2.5.2.3.4.2. Discharge must occur only after sufficient time has elapsed to decant the oil and water contents.

C2.5.2.3.4.3. If discharging above the waterline, discharge shall be visually checked and stopped if the discharge of oil is detected.

C2.5.2.3.4.4. Before discharging below the waterline, the level of the oil and water interface shall be found by using an oil water interface detector.

C2.5.2.3.5. Oily ballast residue still in cargo tanks or fuel tanks shall be transferred to an OWHT.

C2.5.2.3.6. Cargo tank or fuel tank ballast water shall be discharged into the marine environment only while the ship is underway, proceeding en route at distances from shore as specified in subparagraph C2.5.2.3.4.1.

## C2.6. CONSTRUCTION AND EQUIPMENT STANDARDS

### C2.6.1. General

C2.6.1.1. The standards specified in this section shall be administered taking full account of the stringent military requirements for reliability, maintainability, safety, and life-cycle cost. Each Military Service Technical Authority shall be responsible for approving equipment applicable to the unique mission of its own ships. Equipment approved by the USCG according to reference (h) is considered acceptable if the service-use requirements of each ship are fulfilled. If equipment does not meet the requirements of the cognizant Military Service, that Service shall be responsible for developing the required equipment.

C2.6.1.2. The USCG- or the DoD Component-approved OCM systems shall be installed aboard all existing ships that have the capability of discharging oily waste directly overboard by December 31, 2010. Planning, design, procurement, and installation of the equipment shall follow an orderly, phased, and level-funded program schedule.

C2.6.1.3. The cognizant DoD Component shall have oil pollution prevention equipment installed on new ships during their initial operation.

C2.6.1.4. While it may not always be reasonable and practicable to reach every remote shipboard space containing potentially minimal amounts of oily waste, the DoD Components shall strive to design the most effective and efficient OWS systems (such as piping arrangements) that consider the cost constraints and requirements of their respective Military Service.

## C2.6.2. Ships

C2.6.2.1. The ship construction and equipment standards in this paragraph apply to ships with the gross displacement shown for each respective standard. Additional standards applying only to oilers and oil tankers owned or operated by the DoD Components are provided in paragraph C2.6.3.

C2.6.2.2. OWS Systems. OWS systems shall be installed on all ships (except submarines) of gross displacement greater than 400 metric tons. The system follows those standards specified in reference (h), so far as is reasonable and practicable given the unique requirements of the respective DoD Component.

C2.6.2.3. OCMs. OCMs shall be installed in the oily waste overboard discharge piping of all ships (except submarines) of gross displacement greater than 400 metric tons. The monitors shall be designed according to those standards specified in reference (h), so far as is reasonable and practicable given the unique requirements of the respective DoD Component.

C2.6.2.4. WOTs. Ships of gross displacement greater than 400 metric tons shall be provided with a tank or tanks of adequate capacity to receive all waste oil (oil sludge or residue) generated during normal shipboard operations. Tank capacity shall be decided by the type of machinery aboard the ship, the length of expected voyages, and the size of the applicable ship.

Tanks shall be designed and constructed to ease their cleaning and the discharge of their contents to proper shore reception facilities.

C2.6.2.5. Ship-to-Shore Transfer Equipment. Ships of gross displacement greater than 400 metric tons shall have piping, pumps, fittings, and adapters that allow safe and efficient offload of shipboard oily residues and oily mixtures to shore reception facilities. When visiting international ports, such ships also shall have adapters that allow connection with transfer hoses using the standard flange specified by the IMO and described in Appendix 3.

C2.6.2.6. Compensated Fuel Ballast Systems. All new ships with compensated fuel ballast systems shall be outfitted with system modifications to reduce oil discharges during refueling operations. Existing compensated fuel ballast system designs shall be reviewed periodically for potential cost-effective improvements.

C2.6.2.7. Tank Level Indicators. All new ships shall be outfitted with monitoring devices, such as tank level and pressure indicators, to reduce the potential for overboard spills during fueling and oil and oily waste handling and transfer operations.

### C2.6.3. Oilers and Oil Tankers

C2.6.3.1. Introduction. The construction and equipment standards in this paragraph apply to oilers and oil tankers that the DoD Components own or operate. These standards must be met in addition to those specified for all ships in paragraph C2.6.2.

C2.6.3.2. OWS Systems. OWS systems, as specified in subparagraph C2.6.2.2., shall be installed on all oilers and oil tankers of gross displacement greater than 150 metric tons.

C2.6.3.3. OCMs. OCMs, as specified in subparagraph C2.6.2.3., shall be installed in oily waste overboard discharge lines aboard all oilers and oil tankers of gross displacement greater than 150 metric tons.

C2.6.3.4. Cargo Tank Cleaning. Oilers and oil tankers of gross displacement greater than 150 metric tons shall have adequate means for cleaning cargo tanks and for transferring the tank washings to an OWHT (see subparagraph C2.6.3.5.) before cargo tank ballast operations.

C2.6.3.5. OWHTs. Oilers and oil tankers of gross displacement greater than 150 metric tons shall have OWHTs that are able to sufficiently hold dirty ballast residues and the slops generated by cargo tank washing. Existing oilers and oil tankers may designate any empty cargo tank as an OWHT. OWHTs on new ships shall be designed to avoid excessive turbulence, entrainment, and emulsion of oil in water.

C2.6.3.6. Oil Water Interface Detectors. Oilers and oil tankers of gross displacement greater than 150 metric tons shall have at least one OWHT and be capable of rapidly and accurately locating the oil and water interface within a tank. An oil water interface detector shall

be available to detect the oil and water interface in any tank from which discharge to the marine environment is intended.

C2.6.3.7. Segregated Ballast Tanks. Segregated ballast tanks shall be provided for all new oilers or oil tankers of 30,000 deadweight tons or more. They shall enable the ship to operate safely on voyages without introducing ballast water to cargo tanks, except in emergencies that threaten the stability and safety of the ship. Segregated ballast tanks shall be located along the length of the ship so they provide protection to cargo tanks against collision, grounding, or hostile action.

C2.6.3.8. Pumps, Piping, and Discharge Arrangements. All new oilers or oil tankers designed with segregated ballast tanks shall include oil piping that reduces oil retention in the lines. They shall have the means to drain all cargo pumps and all oil lines at the completion of cargo discharge both ashore and to a cargo tank or OWHT.

C2.6.3.9. Ship-to-Shore Transfer Equipment. All oilers and oil tankers shall have ship-to-shore transfer equipment as specified in subparagraph C2.6.2.5. New oilers and oil tankers shall be able to transfer dirty ballast water and any other oil-contaminated water to shore facilities. Deck connections for discharge to shore shall be located on the open deck on both sides of the ship.

## C2.7. INSPECTIONS

All oil tankers of 150 metric tons (gross tonnage) and above, and all other ships of 400 metric tons (gross tonnage) and above, shall be inspected by their respective DoD Component or, on request, by the USCG, according to the following schedule:

C2.7.1. An initial inspection shall be conducted before the ship is put in service or just after installation of the equipment described in section C2.6. and shall include a complete survey of appropriate parts of the ship's structure, equipment systems, fittings, arrangements, and material to ensure full compliance with the standards set forth in section C2.6.

C2.7.2. A periodic inspection shall be conducted at intervals specified by the Head of the respective DoD Component, not to exceed 5 years, to ensure that each ship continues to comply with the standards set forth in this chapter. The inspections shall include a survey of the integrity and working order of appropriate parts of each ship's structure, equipment, and associated pump and piping systems, including oil discharge monitoring and control systems and oil water separating equipment.

## C2.8. CERTIFICATION AND TRAINING

C2.8.1. When an inspection described in section C2.7. finds that a particular ship complies with the standards set forth in this chapter, the ship shall be certified by the Head of the respective DoD Component or his or her designee as being in compliance.

C2.8.2. When an inspection described in section C2.7. finds that a particular ship does not comply with the standards of this chapter, corrective action shall begin immediately to bring the ship into compliance. Insofar as is reasonable and practicable without impairing the operations or operational capability of the ship, any necessary action shall be completed and the ship shall be certified compliant before it may proceed to sea.

C2.8.3. The issuance of an International Oil Pollution Prevention Certificate by the USCG, in accordance with Part 151 of reference (f), shall satisfy the inspection and certification requirements of this section.

C2.8.4. The certificate required by this section shall no longer be valid after significant alteration to the ship's construction, equipment, systems, fittings, arrangements, or material; except that the direct replacement of such equipment, systems, or fittings shall not invalidate the certificate.

C2.8.5. Personnel who receive, transfer, or dispose of oil products or supervise these processes shall, before completing these duties, be trained to the DoD Component specified standards in the proper procedures for connecting and disconnecting systems to other ships and shore facilities, transferring oil or oily waste, maintaining transfer equipment (including the OWS and associated equipment), and executing oil spill response.

## AP1. APPENDIX 1

### DEFINITIONS

To retain consistency with applicable laws and regulations, the Definitions appendix is subdivided into three sections: definitions used throughout this Regulation (section AP1.1.), definitions applicable to vessels and marine sanitation devices in Chapter 1 (section AP1.2.), and definitions applicable to ships and oil pollution prevention in Chapter 2 (section AP1.3.).

#### AP1.1. GENERAL DEFINITIONS

AP1.1.1. Combatant. A ship primarily for combat with the enemy.

AP1.1.2. Contiguous Zone of the United States. The belt of high seas, 9 nm wide, that is next to and seaward of the territorial seas of the United States and that extends from 3 nm to 12 nm, as measured from the territorial sea baseline.

AP1.1.3. Discharge. Any release, such as escape, spilling, leaking, pumping, pouring, emitting, emptying, and dumping of sewage, oil, or oily waste from a vessel.

AP1.1.4. DoD Ship. A warship, naval auxiliary, or other oceangoing ship owned or operated by the Department of Defense, when engaged in noncommercial service. An oceangoing ship is a ship that at any time operates seaward of the outermost boundary of the Territorial Seas of the United States and is capable of international transit.

AP1.1.5. DoD Vessels. Ships, boats, and other watercraft, including those used in civil works activities of the U.S. Army Corps of Engineers that are owned or operated by the DoD Components.

AP1.1.6. Navigable Waters of the United States. The Territorial Seas of the United States and waters shoreward of the territorial sea baseline.

AP1.1.7. Public Vessel. A vessel owned, or bareboat chartered and operated, by the United States, except when such vessel is engaged in commerce.

AP1.1.8. Ship. A vessel of any type whatsoever, including hydrofoils, air-cushion vehicles, submersibles, and floating craft.

AP1.1.9. Tank. An enclosed space that carries liquid in bulk and is formed by the permanent structure of a vessel or a stand-alone container, not part of the permanent structure of the vessel, used for similar purposes.

AP1.1.10. Technical Authority. An acquisition official in a technical oversight office responsible for approving systems and equipment for installation on vessels, and administering certification requirements.

AP1.1.11. Territorial Seas of the United States. The belt of the seas measured from the line of ordinary low water along a part of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 nm (0-3 nm).

AP1.1.12. United States. Includes all States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

AP1.1.13. Vessel. Includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

## AP1.2. DEFINITIONS USED IN CHAPTER 1

AP1.2.1. Existing Vessel. A DoD vessel on which construction began before January 30, 1975.

AP1.2.2. Failure. Any malfunction that causes a MSD to shut down or, if not corrected, that could prevent sewage processing or prevent the MSD from meeting the applicable performance requirements defined in subparagraphs AP1.2.7.1. through AP1.2.7.3. Failure does not include malfunctions of short duration that may be corrected while the system is receiving sewage and before overboard discharge or system shutdown is required.

AP1.2.3. Fecal Coliform Bacteria. Organisms associated with the intestines of warm-blooded animals that are commonly used to show the presence of fecal material and the potential presence of organisms capable of causing human disease.

AP1.2.4. Flow-Through MSD. An MSD that, by design, discharges treated sewage wastes overboard.

AP1.2.5. Graywater. Water that is discarded from deck drains, lavatories, showers, galleys, laundries, and shipboard medical facilities, not including industrial wastes, infectious wastes, and human body wastes.

AP1.2.6. Manufacturer. A person who makes, assembles, or imports MSDs for vessels.

AP1.2.7. Marine Sanitation Device (MSD). Equipment installed in a vessel to receive, hold, treat, or discharge sewage. For this Regulation, the three types of MSDs are:



AP1.2.7.1. Type I MSD. A DoD Component- or a USCG-certified flow-through device that is able to produce an effluent with a maximum fecal coliform bacterial count of 1,000 per 100 milliliters and with no visible floating solids.

AP1.2.7.2. Type II MSD. A DoD Component- or a USCG-certified flow-through device that is able to produce an effluent with a maximum fecal coliform bacterial count of 200 per 100 milliliters and a maximum total suspended solids concentration of 150 milligrams per liter.

AP1.2.7.3. Type III MSD. A DoD Component- or a USCG-certified device that is designed to prevent the overboard discharge of treated or untreated sewage or any waste derived from sewage and that holds untreated or treated sewage onboard for discharge in legally designated areas or at proper shore facilities.

AP1.2.7.3.1. Type III-A MSD. A DoD Component- or a USCG-certified device that treats and holds the treated sewage. This type includes reduced flush devices that ultimately evaporate or incinerate the sewage to a sterile sludge or ash.

AP1.2.7.3.2. Type III-B MSD. A DoD Component- or a USCG-certified system consisting of drain piping, holding tanks, pumps, valves, connectors, and other equipment used to collect and hold shipboard sewage waste for later transfer to a shore sewage system or sewage barge, or for overboard discharge when in unrestricted waters (also known as a collection, holding, and transfer system).

AP1.2.8. New Vessel. A DoD vessel on which construction was begun on or after January 30, 1975.

AP1.2.9. Sewage. Human body wastes and wastes from toilets or other receptacles intended to receive human body wastes.

AP1.2.10. Unrestricted Waters. Waters seaward of the Territorial Seas of the United States.

AP1.2.11. Visible Floating Solids. The weight of material kept on the screen after passing quickly through a U.S. Sieve No. 12 and drying to a constant weight in an oven at 103° C divided by the volume of the sample. Visible Floating Solids are expressed in milligrams per liter.

### AP1.3. DEFINITIONS USED IN CHAPTER 2

AP1.3.1. Compensated Fuel Ballast System. An automatic shipboard fuel system consisting of banks of interconnected tanks that discharge tank ballast water as new fuel is added and that add ballast water to replace fuel as it is consumed during ship operations. Such systems ensure that the tanks are filled with fuel, water, or a mixture of both.

AP1.3.2. Contaminated Fuel Settling Tank. A tank specifically designated to capture strippings from fuel storage and service tanks.

AP1.3.3. Deadweight. Loaded displacement less light displacement: the difference in metric tons between the displacement of the vessel in water of a specific gravity of 1.025 at the load waterline corresponding to the assigned summer freeboard and the light displacement of the vessel. The determination of deadweight deserves special attention. The term light displacement applicable to this definition has been modified from its conventional meaning to include dry cargo displacement, but excludes liquid cargo, fuel and lubricating oil, ballast, fresh and feed water, consumable stores, and passengers or crew or their belongings. When computing the deadweight of a vessel (loaded displacement less light displacement), the dry cargo displacement should be included in the light displacement. Deadweight then becomes a measure more directly related to the oil pollution potential of a particular vessel. This adjusted measurement is important particularly with regard to the Navy's unique multipurpose logistics ships such as the Fast Combat Support Ships which, unlike commercial tankers, are equipped to simultaneously carry both dry and liquid cargoes.

AP1.3.5. Eductor. A jet pump used primarily for pumping bilges, de-ballasting, and de-watering compartments.

AP1.3.6. Existing Oiler or Oil Tanker. A DoD oiler or DoD oil tanker that is not a New Oiler or Oil Tanker.

AP1.3.7. Existing Ship. A DoD ship that is not a New Ship.

AP1.3.8. From the Nearest Land. The datum from which the territorial sea of a sovereign state is measured according to international law. The exception, for this Regulation, is the nearest land off the Northeastern coast of Australia which shall be measured from a line drawn from a point on the coast of Australia at:

AP1.3.8.1. Latitude 11°00' S., longitude 142°08' E., to a point at

AP1.3.8.2. Latitude 10°35' S., longitude 141°55' E., to a point at

AP1.3.8.3. Latitude 10°00' S., longitude 142°00' E., to a point at

AP1.3.8.4. Latitude 9°10' S., longitude 143°52' E., to a point at

AP1.3.8.5. Latitude 9°00' S., longitude 144°30' E., to a point at

AP1.3.8.6. Latitude 13°00' S., longitude 144°00' E., to a point at

AP1.3.8.7. Latitude 15°00' S., longitude 146°00' E., to a point at

AP1.3.8.8. Latitude 18°00' S., longitude 147°00' E., to a point at

AP1.3.8.9. Latitude 21°00' S., longitude 153°00' E., to a point on the coast of Australia at latitude 24°42' S., longitude 153°15' E.

AP1.3.9. Fueling at Sea. The act of transferring fuel from one ship to another on the open sea while the ships are underway.

AP1.3.10. Fuel Oil. Any oil used as fuel to propel a vessel or to operate a vessel's auxiliary machinery.

AP1.3.11. Light Displacement. The displacement of a vessel in metric tons including dry cargo displacement, but excluding liquid cargo, fuel and lubricating oil, ballast, fresh and feed water, consumable stores, and passengers or crew or their belongings.

AP1.3.12. Major Conversion. A conversion of an existing DoD vessel that:

AP1.3.12.1. Substantially alters the dimensions or carrying capacity of the vessel.

AP1.3.12.2. Changes the class of the vessel.

AP1.3.13. New Oiler or Oil Tanker. An oiler or oil tanker:

AP1.3.13.1. For which the building contract is placed after December 31, 1980; or

AP1.3.13.2. Which has undergone a major conversion:

AP1.3.13.2.1. For which the contract is placed after December 31, 1982; or

AP1.3.13.2.2. Which is completed after December 31, 1985.

AP1.3.14. New Ship. A DoD ship:

AP1.3.14.1. For which the building contract is placed after December 31, 1980; or

AP1.3.14.2. Which has undergone a major conversion:

AP1.3.14.2.1. For which the contract is placed after December 31, 1982; or

AP1.3.14.2.2. Which is completed after December 31, 1985.

AP1.3.15. Oil. Petroleum, whether in solid, semi-solid, emulsified, or liquid form, including but not limited to, crude oil, fuel oil, sludge, oil refuse, oil residue, and refined products, and, without limiting the generality of the foregoing, including the substances listed in Appendix I of Annex I of reference (c). Oil does not include animal and vegetable based oil or noxious liquid substances designated under Annex II of reference (c).

AP1.3.16. Oil Content Monitor (OCM). An analytical instrument that measures and displays the oil content (in ppm) of the effluent of the OWS and automatically stops the effluent from discharging overboard if the oil content exceeds the equipment's alarm set point.

AP1.3.17. Oil Tanker. A DoD ship constructed or adapted primarily to carry oil in bulk in its cargo spaces, including combination carriers when they are carrying oil in bulk. A combination carrier is a ship designed to carry either oil or solid cargoes in bulk.

AP1.3.18. Oiler. A DoD ship designed and constructed to conduct fueling at sea and to carry and deliver bulk petroleum, oil, and lubricants to combatants and other ships underway. A ship carrying oil as a secondary cargo is not an oiler.

AP1.3.19. Oil/Water Separator (OWS). Water treatment equipment that removes the oil part from an oil and water mixture. Oil and water separation involves several techniques that use parallel plate separators, coalescing filters, centrifugal separators, and various polishing technologies. The OWS's output, during normal operation, should be less than 15 ppm of oil remaining in the water.

AP1.3.20. Oily Mixture. A mixture with any oil content, including bilge slops, oily wastes, oil residues (sludge), oily ballast water, and washings from cargo oil tanks.

AP1.3.21. Oily Waste. A mixture of oil and water or oil and other fluids that is no longer useful.

AP1.3.22. Oily Waste Holding Tank (OWHT). A tank specifically designated to collect tank drainings, tank washings, and other oily mixtures.

AP1.3.23. Restricted Waters. MARPOL Special Areas and the territorial seas of the United States (0-3 nm) and the contiguous zone of the United States (3-12 nm).

AP1.3.24. Segregated Ballast. The ballast water introduced into a tank that is separated completely from the cargo oil and fuel oil system and that is allocated permanently to carrying ballast or cargoes other than oil.

AP1.3.25. Sheen. An iridescent appearance on the surface of the water.

AP1.3.26. Special Area. Current MARPOL Annex I Special Areas (see figure AP2.F1.):

AP1.26.1. The Mediterranean Sea area includes the Mediterranean Sea proper, including the gulfs and seas therein, with the boundary between the Mediterranean and the Black Sea constituted by the 41°N. parallel and bounded to the west by the Straits of Gibraltar and the meridian of 5°36'W.

AP1.3.26.2. The Baltic Sea area includes the Baltic Sea proper, with the Gulf of Bothnia, the Gulf of Finland, and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.

AP1.3.26.3. The Black Sea area includes the Black Sea proper, with the boundary between the Mediterranean and the Black Sea constituted by the 41°N. parallel.

AP1.3.26.4. The Antarctic area includes the sea south of latitude 60°S.

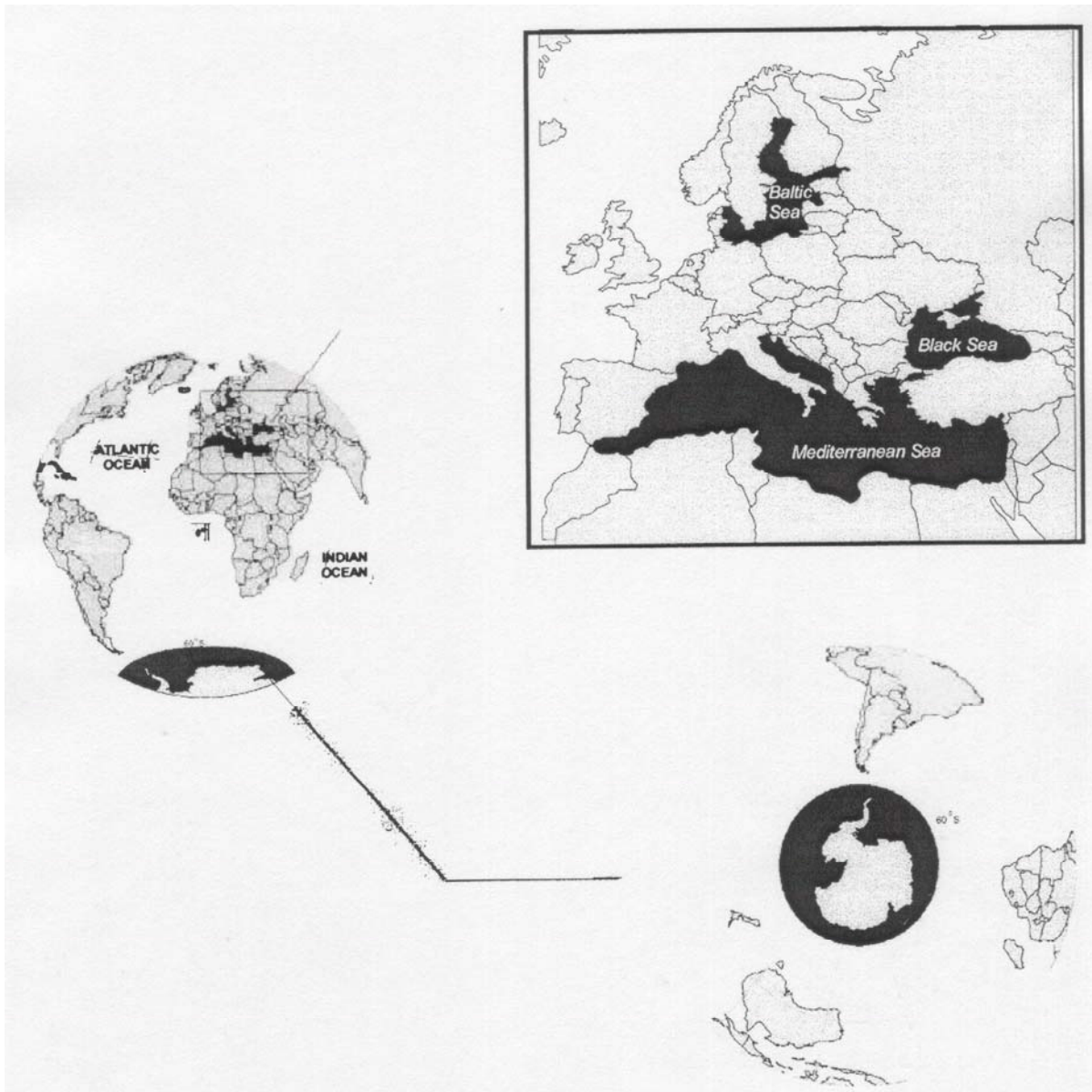
AP1.3.27. Waste Oil. Refined oil that has changed markedly from its original characteristic specifications, has become unsuitable for further use, and is not economically recyclable.

AP1.3.28. Waste Oil Tank (WOT). A tank specifically designated to collect shipboard waste oil, such as oil residue and oil sludge.

AP2. APPENDIX 2

MARPOL ANNEX I SPECIAL AREAS

Figure AP2.F1. Location of MARPOL Annex I Special Areas



AP3. APPENDIX 3STANDARD IMO FLANGE

The IMO has specific standard dimensions for flanges used to connect shoreside transfer hoses to ship deck connections. These dimensions are detailed in table AP3.T1. An illustration of the flange itself is provided in figure AP3.F1.

Table AP3.T1. IMO Flange Dimensions

DIMENSION	Standard
OUTSIDE DIAMETER	215 millimeters (mm)
INNER DIAMETER	Sized to fit mating hose or piping
BOLT CIRCLE DIAMETER	Six holes 22 mm in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery; the slot width to be 22 mm
FLANGE THICKNESS	20 mm
BOLTS AND NUTS	Six, each 20 mm in diameter and of suitable length
OPERATING PRESSURE	6 kilograms / square centimeter

Figure AP3.F1. Standard IMO Flange