

## CHAPTER 19

### ENVIRONMENTAL COMPLIANCE AFLOAT

#### 19-1 Scope

**19-1.1 General.** This chapter defines environmental compliance policies and procedures applicable to shipboard operations. Since this chapter applies only to ships and floating drydocks and covers all media, its format is different from the remainder of the manual. Organization is according to the various pollutants produced aboard ship. Each section lists the applicable legislation, definitions, requirements, policy and training. The end of the chapter contains a summary of responsibilities by command.

Topics covered in this chapter are as follows:

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#### 19-1.2 Applicability

a. This chapter applies to U.S. Navy ships and floating drydocks worldwide. As appropriate, it applies to the boats and other craft carried by these ships. This chapter also applies to those ships under contract to the Commander, Military Sealift Command (COMSC) that are public vessels of the United States (U.S.). Vessels owned or bareboat chartered and operated by the MSC are public vessels. This chapter does not apply to those ships under contract to COMSC that are not public vessels, such as ships that are time or voyage chartered.

b. Ships need only refer to this chapter and chapter 21 (Ocean Dumping) for environmental compliance. If differences in policy exist between this chapter and any other chapter in this instruction, this chapter takes precedence.

**19-1.3 References.** Relevant references for this chapter are:

- a. Naval Warfare Publication (NWP) 4-11, Environmental Protection; (NOTAL).
- b. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair (Surface Coating/Painting Operations), 40 CFR 63, SUBPART II; (NOTAL)
- c. Naval Ships' Technical Manual (NSTM); (NOTAL)
- d. OPNAVINST 5100.19D, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat; (NOTAL)
- e. OPNAVINST 3100.6G, Special Incident Reporting (OPREP 3, Navy Blue and Unit SITREP) Procedures; (NOTAL)
- f. NAVFACENCOM Manual MO 909 (Oil Ship Waste Offload Barge); (NOTAL)
- g. DOD Instruction 4715.4 of 1 June 1998, Pollution Prevention (NOTAL)
- h. NAVSEA PCB Advisories; (NOTAL )
- i. OPNAV P-45-113-3-99, Afloat Medical Waste Management Guide (NOTAL)
- j. NAVMED Publication P-5010-7, Manual for Naval Preventative Medicine, Sewage Disposal Ashore and Afloat; (NOTAL).

**19-2 General**

**19-2.1 Terms and Definitions**

**19-2.1.1 Contiguous Zone.** A zone of the ocean extending from 3-12 nm from the U.S. coastline.

**19-2.1.2 Navigable Waters.** The territorial sea and internal waters (rivers, lakes) of the U.S.

**19-2.1.3 Territorial Sea.** For purposes of this instruction, a zone of the ocean extending from the U.S. coastline out to 3 nm from shore.

**19-2.1.4 United States.** For the purposes of this chapter, the U.S. includes the Commonwealth of Puerto Rico, Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Marianas Islands.

**19-2.2 Navy Policy**

**19-2.2.1 Environmentally Sound Ships.** Protection of the marine environment is mission essential. Navy ships shall conduct operations, in port and at sea, minimizing or eliminating any adverse impact on the marine environment.

**19-2.2.2 Shoreside Support to Ships.** Compliance with local environmental requirements often requires specialized knowledge, expertise or capability that afloat units may lack. To the maximum extent

possible, shore commands and Regional Environmental Coordinators (RECs) shall provide to afloat units, upon request, such assistance as may be necessary to ensure their environmental compliance.

**19-2.2.3 Environmental Inspection of Navy Ships.** Within the U.S., Navy ships shall be available for inspection by environmental officials, provided the inspector demonstrates a legitimate basis for requesting access, and subject to the requirements to protect national security information. Section 19-2.2.3.1 addresses access to Navy ships and release of information regarding Navy oil spills. Section 19-2.2.3.2 addresses access to Navy ships for all other environmental purposes.

**19-2.2.3.1 Access to Ships and Release of Information During Navy Oil Spills.** Effective oil spill planning and response is an important issue for the Navy, for regulatory agencies, and for the public. Navy ships may receive requests from non-Navy entities for access and/or information pertaining to Navy oil spill planning and response. Commanding officers shall consider several factors in responding to these requests. First, they shall quickly provide officials and agencies responsible under law and regulation responding to an actual spill with the necessary access and/or information to minimize environmental damage and Navy liability. Second, they shall ensure all access granted and information disseminated is consistent with Navy information security requirements. Third, they shall ensure that initial information released about oil spills is as accurate as possible and that it is characterized as preliminary and subject to later verification.

**a. Access to Ships**

(1) During oil spill response emergencies, although not mandated by law, commanding officers and masters should allow Federal On-Scene Coordinator (FOSC) representatives access to their ships if requested, consistent with information security requirements. The U.S. Coast Guard is designated the FOSC for oil spills in the coastal regions of the U.S.

(2) During non-emergency situations, Navy ships are not subject to inspection by Coast Guard, State, or local officials in connection with oil spill planning. Commanding officers shall cooperate, however, with the Coast Guard and civilian authorities regarding oil spill planning and prevention consistent with information security requirements without impeding mission accomplishment. Commanding officers, at their discretion, may invite Coast Guard, State, and local officials aboard their ships for assist visits or other discussions. They shall coordinate requests for such access with the cognizant Navy On-Scene Commander (NOSC) who in most cases is the Navy REC.

**b. Information Dissemination**

(1) Ships shall promptly and accurately respond to Federal, State, and local government requests for information necessary to coordinate spill response and cleanup efforts or to prevent or reduce environmental damage. Ship commanding officers providing initial information should indicate that the information provided is preliminary and is subject to verification or change during subsequent investigation.

(2) Ships should promptly respond to Federal, State, and local government requests for the following preliminary information about Navy oil spills:

- (a) Whether an oil spill has occurred
- (b) The specific source of the spill

- (c) The type of substance spilled
- (d) When the spill occurred
- (e) Where the spill occurred
- (f) The initial indication as to the general nature of the cause of the incident, e.g., whether due to equipment failure, operator error, or undetermined origin
- (g) A preliminary estimate of how much oil was spilled.

Commands providing preliminary information should indicate that the provided information is preliminary and is subject to verification or change during subsequent investigation. Ships receiving requests for investigation reports shall inform requestors that they will forward any Navy investigation reports generated in connection with the spill to the Office of the Judge Advocate General (OJAG). OJAG will control the release of investigation reports.

- c. When claims by or against the Navy have been filed or are reasonably anticipated, requests for information pertaining to oil spills shall be referred to the Navy attorney representing the cognizant NOSC.
- d. The commanding officer will refer any media requests for information to the public affairs officer on the cognizant NOSC staff.

**19-2.2.3.2 Environmental Inspector Access Procedures Within the U.S.** If a State or local inspector requests access to inspect a Navy ship, the parties involved shall follow these procedures:

- a. The commanding officer shall confirm the inspector's credentials.
- b. The inspector shall identify spaces or work sites to which he requests access.
- c. The inspector shall make known the nature of the activity to be examined and its relationship to regulations. The commanding officer should consult counsel if there is any question on the applicability of the law or regulation to ships.
- d. If the issue is a result of contractor actions aboard ship, a representative of the contractor shall accompany the inspector and ship representative.
- e. If practical, the ship shall suggest off-ship alternatives that involve similar operations or training demonstrations conducted ashore.
- f. If off-ship alternatives are not practical, commanding officers shall approve inspections that do not involve access by inspectors to classified or restricted information, equipment, technology, or operations.
- g. Shipboard air conditioning and refrigeration (AC&R) equipment designed or constructed to general or military specification (GENSPEC/ MILSPEC) requirements on board Navy ships or vessels owned, operated, or bare-boat chartered by the Navy or COMSC are not subject to the requirements of

U.S. EPA Clean Air Act regulations on refrigerants. Federal, State and local regulatory personnel have no authority to inspect Navy ships or ship records to enforce these requirements. If regulatory personnel request to board Navy ships for this purpose, do not grant access. Follow the procedures of paragraph 19-2.2.3.4 and notify CNO (N45) by routine message with information copies to the chain of command, should this occur.

**19-2.2.3.3 Environmental Inspector Security Clearances.** If the inspector requests access to sensitive areas such as spaces containing cryptographic equipment, sonar systems, or nuclear propulsion plant spaces (NNPS) or nuclear propulsion plant information (NNPI) and the commanding officer concludes that a legitimate requirement exists for such access, he/she shall forward a message request for access to CNO (N45) with information copies to the fleet commander in chief (CINC) and type commander, for spaces that would involve access to classified information or CNO (N00N) for NNPS/NNPI. The message shall identify the following:

- a. The space to which the inspector wants access
- b. The nature of the activity that the inspector wants to examine
- c. The classified or restricted information, equipment, or operation to which the inspector would have access during the proposed inspection
- d. The proposed alternatives which do not involve such access
- e. Reasons why the inspector finds the proposed alternatives unsatisfactory
- f. Security clearance information, including name of inspecting official(s), date of visit, name of agency which the official(s) represent, and level, basis, and date of security clearance.

The commanding officer shall inform State or local inspector(s) that the security implications of their request require consideration at Navy headquarters.

**19-2.2.3.4 Environmental Inspection Dispute Resolution.** If the commanding officer determines that the inspector does not have a requirement for access to the spaces or information cited above, but the inspector does not agree with that determination, the commanding officer shall promptly refer the matter up the chain of command for resolution by CNO (N45/N00N) as described above.

**19-2.2.4 Environmental Inspections of Navy Ships Outside the U.S.** Navy ships within the territory of foreign countries (internal waters, ports and seas out to 12 nm from land) are not legally subject to enforcement of environmental requirements by these coastal or port states or local authorities. However, they must operate in due regard for that nation's resource-related laws and regulations. Additionally, Navy ships must comply with any environmental regulations established in port visit clearances and the local Status of Forces Agreements (SOFAs).

Environmental officials representing the foreign country or local authority do not have the authority to inspect U.S. Navy ships to determine compliance with that country's laws. If a Navy ship is approached by representatives of a foreign country while in foreign waters with a request to inspect the ship regarding a possible environmental violation, the commanding officer shall refuse to permit the inspection and shall notify the U.S. embassy, CNO (N45/N00N) and the chain of command of the request, the alleged violation, and any amplifying information.

If the ship has violated or is perceived to be in violation of the foreign country's environmental laws or regulations, the country may request the ship to leave port or the ocean area under its jurisdiction. In this event, the commanding officer shall comply with the request and notify the U.S. embassy, CNO (N45), and the chain of command of this action.

**19-2.2.5 Notices of Violations.** Ships shall comply with the provisions of appendix B regarding notices of violation or other expressions of environmental regulatory concern.

#### **19-2.2.6 Afloat Environmental Compliance Inspections and Assessments**

a. The afloat environmental compliance inspection process shall consist of oversight inspections by the Board of Inspection and Survey (INSURV). INSURV shall conduct environmental compliance oversight inspections for forces afloat as a part of the regular INSURV inspection process using appendix K. These inspections shall include equipment operation, program compliance and effectiveness, and training. The President, Board of Inspection and Survey (PRESINSURV) shall report the status of afloat environmental compliance and effectiveness and issues requiring CNO attention as a part of the periodic briefings to the CNO.

b. Since regular INSURV inspections occur every 5 years, immediate superiors in command (ISICs) will schedule "intervening" environmental protection assessments. These "intervening" environmental protection assessments will be conducted inport during the inter-deployment training cycle (IDTC) by a small group of INSURV industrial hygiene officers and oil pollution abatement, marine sanitation device, and plastic waste processor equipment experts. The assessment (including training to improve program effectiveness) will take approximately 2 days with a letter report to the commanding officer only. INSURV will combine data collected during these "intervening" environmental protection assessments with that from final contract trials and underway material inspections in the INSURV database for use by type commanders, CNO (N45), NAVSAFECEN, and other environmental protection organizations. For ships not in a normal IDTC cycle, ISICs shall conduct an "intervening" environmental protection assessment at least every 36 months.

c. In the event that a commanding officer may want to evaluate his/her command's environmental compliance practices, the Afloat Environmental Checklist of appendix K will assist in this evaluation.

#### **19-2.2.7 Training**

a. All hands shall receive environmental training upon reporting aboard (I Division or School of the Boat) and annually thereafter. This training shall include:

(1) The Navy's commitment to environmental protection.

(2) The command environmental program. This training should include pollution prevention, solid waste handling and minimization, plastics management, recycling, air pollution (including ozone depleting substances (ODSs)) and oil and hazardous substance spill response.

(3) The member's responsibility with regard to this program. Ships may accomplish this training with videotapes for general subject matter and by ship's instructors for command specific topics.

b. Watch officers responsible for authorizing the overboard disposal of shipboard wastes shall receive training on the prohibited zones for the discharge of shipboard wastes as a part of the qualification for the watch.

c. Personnel assigned as Afloat Environmental Protection Coordinator (AEPC) per paragraph 19-2.2.11 shall complete the ICW software training or the NAVOSHENVTRACEN Course A-4J-0021 within 6 months of assignment.

#### **19-2.2.8 Exclusion of Vessel Discharges from National Pollutant Discharge Elimination System (NPDES) Permitting**

a. Per regulations issued by the U.S. Environmental Protection Agency (EPA), discharges incidental to the normal operation of a vessel do not require a permit under the NPDES program. The following are examples of incidental discharges:

- (1) Effluent from properly functioning oil/water separators
- (2) Sewage (when discharge is necessary)
- (3) Graywater
- (4) Cooling water
- (5) Boiler and steam generator blowdown
- (6) Weather deck runoff, including fresh water washdowns
- (7) Ballast water

Naval vessels shall not enter into agreements with environmental agencies regarding ship discharges without CNO (N45) approval.

b. To promote uniformity in treatment of naval vessel discharges nationwide, CNO (N45) and fleet commanders closely monitor local attempts to impose requirements on ships beyond those specifically provided for by U.S. law or U.S. EPA regulation. Commanding officers or masters shall report any interest expressed by environmental regulators in discharges from U.S. Navy ships or COMSC public vessels, by message to CNO (N45) with information copies to the chain of command.

**19-2.2.9 Operation Within Foreign Nation Waters.** Navy ships are not legally subject to enforcement of environmental requirements by coastal or port States. When operating in foreign territorial waters, or when visiting foreign ports, Navy ships shall abide by environmental provisions contained in port visit clearances and/or in status of forces agreements (SOFAs) (see figure 19.1). Such conditions will normally be communicated to visiting ships in the Port Guide or the Logistics Request (LOGREQ) reply. The U.S. Government has agreed to these conditions in advance. Navy ship compliance with such requirements is in no way an inappropriate relinquishment of U.S. sovereignty. When port visit clearances and SOFAs either do not exist, or do not provide sufficient guidance, Navy ships should attempt to abide by the corresponding requirement for U.S. navigable waters or ports, as delineated in this chapter. In some cases, compliance with the corresponding U.S. requirement will not be feasible overseas, due to lack of offload facilities, environmental services, or some other cause. Where compliance with

U.S. requirements is not feasible, Navy ships should operate in a manner consistent with the environmental practices of host nation warships.

**19-2.2.10 Prohibited Discharge Zones for U.S. Navy Shipboard Wastes.** Figure 19.1 provides a summary of pollution control discharge restrictions for ships.

**19-2.2.11 Afloat Environmental Protection Coordinator.** Commanding officers of ships shall designate a person as the AEPC. The person assigned to this position shall be the commanding officer's advisor on the shipboard environmental protection program. This person shall be knowledgeable regarding the requirements and responsibilities of this chapter and trained per the requirements of paragraph 19-2.2.7c.

**19-2.2.12 Environmental Planning.** While carrying out assigned missions, operational commanders and commanding officers have an obligation to avoid unnecessary damage to the environment. Toward that end, commanders must closely observe laws, regulations, and policy for protecting and preserving the environment in all naval operations. Failure to consider environmental requirements or effects early in the planning process could result in operational delays. Early environmental protection actions or mitigating measures should result in minimal or no limitations or impacts on exercise objectives. Environmental planning must be meticulous to achieve compliance, avoid unnecessary environmental degradation, and maintain public support for the continued use of operating areas. Environmental planning may lead to modifying operational objectives to achieve most if not all goals, selecting more favorable operating areas, and establishing environmental "rules of engagement" that will result in operational success while achieving environmental protection.

The Navy developed Naval Warfare Publication (NWP) 4-11, *Environmental Protection* (reference (a)), to provide commanders and their planning staffs with doctrine to accomplish assigned missions while achieving the highest possible degree of environmental protection and compliance. To support environmental planning, commanders shall develop an Environmental Annex for each operational plan or order.

Reference (a) discusses the environmental planning process for peacetime and military operations other than war (MOOTW) in detail. It also contains guidance for developing the Environmental Annex. Chapter 2 and appendix E provides detailed information on compliance with the requirements of the National Environmental Policy Act (NEPA) and Executive Order 12114 for overseas environmental planning.

## 19-3 Sewage

**19-3.1 Legislation (This section contains background material from which Navy policy is derived).** The Clean Water Act (CWA) authorizes DOD to issue regulations governing the design, construction, installation and operation of marine sanitation devices (MSDs) on board vessels owned and operated by DOD.

### 19-3.2 Terms and Definitions

**19-3.2.1 Graywater.** Discarded water from deck drains, lavatories, showers, dishwashers, and laundries, as well as discarded water from shipboard medical facilities. Does not include industrial wastes, infectious wastes and human body wastes.

**19-3.2.2 Graywater Collection and Transfer System.** An independent, auxiliary graywater collection and transfer system designed to collect graywater and pump the waste to shore facilities in port or direct water overboard at sea. Graywater collection and transfer systems are typically installed on ships with Type III-A marine sanitation devices (MSDs) that may lack the capability to collect and transfer graywater.

**19-3.2.3 Industrial Wastewater.** Wastewater or semi-solid material generated in shipboard processes such as manufacturing, production and maintenance (for example, metal plating, acid cleaning, photo processing, solvent cleaning and painting materials).

**19-3.2.4 Marine Sanitation Device (MSD).** Any equipment on board a ship or craft designed to receive and treat sewage to a level acceptable for overboard discharge, or which receives or retains sewage on board for later discharge ashore or in waters where discharge is permissible. Within the generic term MSD, the Navy uses the following terms to identify general types:

a. **Type I:** "Flow-through" and "discharge" device designed to receive and treat sewage aboard ship and produce an overboard effluent with a fecal coliform count of not more than 1,000 per 100 milliliters and no visible floating solids.

b. **Type II:** "Flow-through" and "discharge" device that produces an overboard effluent with a fecal coliform count of not more than 200 per 100 milliliters and total suspended solids of not more than 150 milligrams per liter.

c. **Type III-A:** "Non-flow-through" device designed to collect shipboard sewage by means of vacuum or other reduced-flush systems and to hold the sewage while transiting navigable waters (0-3 nm). This type may include equipment for shipboard evaporation or incineration of collected sewage.

d. **Type III-B:** Collection, holding and transfer (CHT) system designed to collect both sewage and graywater while in port; to offload sewage and graywater to suitable shore receiving facilities; to hold sewage while transiting within 0-3 nm; and to discharge both sewage and graywater overboard while operating beyond 3 nm.



SUMMARY OF NAVY POLLUTION CONTROL DISCHARGE RESTRICTIONS

AREA	SEWAGE ("BLACK WATER")	GRAYWATER	OILY WASTE
U.S. Internal Waters & Territorial Seas (0-3 nm)	No discharge.	If equipped to collect graywater in CHT system or dedicated graywater system, collect and pump to shore only when pierside. If no collection capability exists, direct discharge permitted.	No sheen. If equipped with OCM, discharge <15 ppm oil. (1)
U.S. Contiguous Zone (3-12 nm)	Direct discharge permitted.	Direct discharge permitted.	No sheen. If equipped with OCM, discharge <15 ppm oil.(1)
12-25 nm	Direct discharge permitted.	Direct discharge permitted.	If equipped with OCM, discharge <15 ppm oil. Ships with OWS or BWPT but no OCM must process all machinery space bilge water through OWS or BWPT. (2) (3)
>25 nm	Direct discharge permitted.	Direct discharge permitted.	Same as 12-25 nm. (2) (3)
>50 nm & High Seas	Direct discharge permitted.	Direct discharge permitted.	Same as 12-25 nm. (2) (3)
MARPOL "Special Areas" In Effect	Direct discharge permitted.	Direct discharge permitted.	Refrain from discharging any oil or oily waste to the extent practicable without endangering ship or impairing operations. Bilge water, same as 12-25 nm. (2) (3)
Foreign Countries	Within foreign territorial seas (12 nm), see Visit Clearance or SOFA (as delineated in the Port Guide or LOGREQ reply). If sufficient guidance not available, no discharges within 3 nm when sewage reception facilities available. If not feasible, follow standards observed by host nation warships.	Within foreign territorial seas (12 nm), see Visit Clearance or SOFA (as delineated in the Port Guide or LOGREQ reply). If sufficient guidance not available, follow guidance above. If not feasible, follow standards observed by host nation warships.	Within foreign territorial seas (12 nm), see Visit Clearance or SOFA (as delineated in the Port Guide or LOGREQ reply). If sufficient guidance not available, follow guidance above. If not feasible, follow standards observed by host nation warships. (3)
Comments	Direct discharge allowed within 3 nm under emergency conditions.	The collection of graywater inside 3 nm from shore and prior to pierside may significantly reduce tank capacity and might result in the unnecessary overboard discharge of sewage before reaching pier facilities or unrestricted waters.	State/local rules may vary; check SOPA regulations.  Submarines without BWPTs: After allowing adequate separation time, pump non-oily, water phase outside 50 nm, or as far from shore as practicable if the operations or operational capabilities of the submarine would be impaired by this requirement.

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**Notes:**

- OWS - Oil/Water Separator
  - OCM - Oil Content Monitor
  - WOCT - Waste Oil Collecting Tank
  - SOPA - Senior Officer Present Afloat
  - BWPT - Bilge Water Processing Tank
- (1) If operating properly, OWS or BWPT discharge will routinely be less than 15 ppm.
  - (2) Surface ships without operable OWS must retain oily waste for shore disposal. If operating conditions require at-sea disposal, minimal discharge is permitted beyond 50 nm from nearest land.
  - (3) If equipped with OWS and OCM and operating conditions prevent achieving <15 ppm, limit discharges to <100 ppm.

Figure 19.1

SUMMARY OF NAVY POLLUTION CONTROL DISCHARGE RESTRICTIONS (Continued)

OPNAVINST 5090.1B CH-3  
17 October 2002

AREA	GARBAGE (NON-PLASTICS)	GARBAGE (PLASTICS) (NON-FOOD CONTAMINATED) (6)	GARBAGE (PLASTICS) (FOOD-CONTAMINATED) (6)
U.S. Internal Waters & Territorial Seas (0-3 nm)	No discharge.	No discharge.	No discharge.
U.S. Contiguous Zone (3-12 nm)	Pulped or comminuted food and pulped paper and cardboard waste may be discharged >3nm.	No discharge.	No discharge.
12-25 nm	Bagged shredded glass and metal waste may be discharged >12nm. Submarines see note (4).	No discharge.	No discharge.
>25 nm	Direct discharge permitted. See note (5).	No discharge.	No discharge.
>50 nm & High Seas	Direct discharge permitted. See note (5).	No discharge.	No discharge.
MARPOL "Special Areas" In Effect	Discharge pulped or comminuted food and pulped paper and cardboard waste >3 nm. Discharge bagged shredded glass and metal waste >12nm. (5) <b>Report all non-food, non-pulped, non-shredded garbage discharges to CNO (N45) upon completion of operations.</b>	No discharge.	No discharge.
Foreign Countries	Discharge pulped or comminuted food and pulped paper and cardboard waste >3 nm from foreign coasts. Discharge bagged shredded glass and metal waste >12nm. Discharge all other garbage >25 nm.	No discharge.	No discharge.
Comments	Garbage discharged should be processed to eliminate floating marine debris. Retain surplus material for shore disposal.	Record-keeping requirements exist for at-sea discharge. Minimal discharge authorized if plastic processor inoperable and necessary for safety of ship/ health of crew. Report discharge commencement to appropriate operational commander.	Record-keeping requirements exist for at-sea discharge. Minimal discharge authorized if plastic processor inoperable and necessary for safety of ship/ health of crew. Report discharge commencement to appropriate operational commander.

**Notes:**

- (4) Submarines may discharge compacted, sinkable garbage between 12 nm and 25 nm provided that the depth of water is greater than 1,000 fathoms.
- (5) If equipped, use pulpers and shredders for all discharges of food products, paper, cardboard, glass and metal wastes. Shredded metal and glass must be bagged prior to disposal
- (6) Submarines are required to discharge only the minimum amount practicable.

Figure 19.1 (Continued)

SUMMARY OF NAVY POLLUTION CONTROL DISCHARGE RESTRICTIONS (Continued)

AREA	HAZARDOUS MATERIALS	MEDICAL WASTES (INFECTIOUS & SHARPS)
U.S. Internal Waters & Territorial Seas (0-3 nm)	No discharge.	Steam sterilize, store, and transfer ashore. No discharges.
U.S. Contiguous Zone (3-12 nm)	No discharge.	Steam sterilize, store, and transfer ashore. No discharges.
12-25 nm	No discharge except as permitted by appendix L.	Steam sterilize, store, and transfer ashore. No discharges.
>25 nm	No discharge except as permitted by appendix L.	Steam sterilize, store, and transfer ashore. No discharges.
>50 nm & High Seas	No discharge unless >200 or as permitted by appendix L.	If health and safety are threatened, steam sterilize waste, package and weight for negative buoyancy, log, and discharge. No discharge of sharps permitted.
MARPOL "Special Areas" In Effect	No discharge except as permitted by appendix L.	Steam sterilize, store, and transfer ashore. No discharges. If >50 nm and health and safety are threatened, steam sterilize waste, package and weight for negative buoyancy, log, and discharge. No discharge of sharps permitted.
Foreign Countries	No discharge except as permitted by appendix L.	The packaging, handling, storage, transport, treatment, and disposal of infectious waste shall be as prescribed by applicable visit clearance, SOPA regulations, and port guides
Comments		Dispose of all sharps ashore. Do not incinerate plastic, wet materials. Steam sterilization requirement not applicable to submarines. Other non-infectious waste may be disposed of as garbage and does not require steam sterilization.

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Figure 19.1 (Continued)



**19-3.2.5 Sewage.** Human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes.

### 19-3.3 Navy Policy

**19-3.3.1 Compliance with Regulations.** To ensure compliance with regulations regarding sewage and graywater:

a. The Navy shall equip ships with MSDs designed to prevent the discharge of untreated or inadequately treated sewage, or of any waste derived from sewage (e.g., sludge), within 0-3 nm of the U.S. Ships unable to collect and transfer graywater to shore while pierside via the installed MSD shall be equipped with graywater collection and transfer systems as soon as possible.

b. All new ships, except for public vessels operated under the direction of COMSC where specifically excluded by Top Level Requirements, shall be equipped only with Type III MSDs certified by COMNAVSEASYSCOM. Type III-A MSDs shall have an auxiliary system capable of collecting and transferring to shore all shipboard graywater generated while pierside.

c. Existing ships equipped with Type I or Type II MSDs installed on or before 1 April 1979 are in compliance so long as the device remains satisfactorily operable.

d. Existing ships with installed toilet facilities, but not equipped with Type I or Type II MSDs installed before 1 April 1979 shall be equipped with Type III MSDs certified by COMNAVSEASYSCOM. Public vessels operated under the direction of COMSC shall be equipped with USCG-approved Type II MSDs. Type I or Type II MSDs that become inoperable and require removal shall be replaced with certified Type III MSDs (MSC vessels shall replace inoperable MSDs with USCG-approved Type II MSDs).

### Figure 19.2

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#### Standard Dimensions of Flanges for Discharge Connections

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Description	Dimension
Outside diameter	210 mm
Inner diameter (1)	According to pipe outside diameter
Bolt circle diameter	170 mm
Slots in flange	4 holes 18 mm in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery. The slot width to be 18 mm.
Flange thickness	16 mm
Bolts and nuts: quantity and diameter	4, each of 16 mm diameter and of suitable length

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The flange is designed to accept pipes up to a maximum internal diameter of 100 mm and shall be of steel or other equivalent material having a flat face. This flange, together with a suitable gasket, shall be suitable for a service pressure of 6 kg/cm<sup>2</sup>.

(1) For ships having a molded depth of 5 m or less, the inner diameter of the discharge connection may be 38 mm.

e. MSD installations shall include the capability for pumping collected sewage and graywater to appropriate shoreside reception facilities. Surface ships, submarines and service craft/boats shall be fitted with cam-lock sewage discharge connections in 4-inch (MS 27025-18), 2-1/2-inch (MS 27025-14) and 1-1/2-inch (MS 27025-10) sizes, respectively. Such fittings shall allow quick connect/disconnect with shoreside offloading hoses.

f. Navy ships visiting foreign ports shall be equipped with adapters to accommodate hoses having international-standard flanges specified by the International Maritime Organization in Annex IV, Regulation 11 of the International Convention on the Prevention of Pollution from Ships (MARPOL). Figure 19.2 provides specifications for such adapters.

g. Ships shall not dispose of industrial wastewater through ships' sewage or graywater collection and transfer systems. Following use, ships shall deliver shipboard industrial wastewater to a shore activity for processing to determine if it has further use and, if not, disposal as waste.

**19-3.3.2 Shipboard Procedures.** Ships shall operate MSDs following these procedures:

a. Ships shall properly operate and maintain MSDs installed aboard Navy ships to prevent the overboard discharge of untreated or inadequately treated sewage, or any waste derived from sewage (e.g., sludge), within 0-3 nm of the U.S. shore.

b. MSDs aboard Navy ships shall collect only sewage while operating or transiting within 3 nm of shore. The collection of graywater would significantly reduce tank-holding capacity and might result in the unnecessary overboard discharge of sewage before reaching pier facilities or unrestricted waters.

c. If equipped, ships shall collect graywater in installed MSDs or graywater collection systems while in port. If not yet equipped to collect graywater, ships may directly discharge it overboard while in port.

d. Navy ships shall not discharge any treated or untreated sewage into freshwater lakes (excluding the Great Lakes), freshwater reservoirs or other freshwater impoundments, or into rivers not capable of interstate navigation. Navy ships that operate in such waters shall be modified to preclude accidental discharge.

e. While operating beyond 3 nm from shore, Navy ships may discharge all sewage and graywater directly overboard. Vessels equipped with a USCG-approved Type I or II MSD shall treat all sewage prior to discharge.

f. Ships shall not dispose of used solvents or other industrial wastes to MSDs or graywater collection systems or dump them down sinks or deck drains. They shall containerize used solvents and industrial wastes for disposal ashore.

- g. COMSC ships equipped with USCG-approved Type II MSDs may discharge via installed MSD.

**19-3.3.3 Ship-to-Shore Transfer.** Navy ships shall follow these procedures in port:

- a. While visiting Navy ports, Navy ships equipped with Type III-A and Type III-B MSDs shall periodically pump their collected sewage and graywater to shoreside reception facilities. The shore activity shall provide the transfer hoses and associated fittings to connect the ship discharge line with the shore equipment.

- b. While visiting non-Navy ports, Navy ships shall request sewage reception facilities in LOGREQs or other pertinent documentation. Ships shall use pier sewers when available. If sewers are not available, ships shall use other sewage collection facilities such as barges or tank trucks unless it is impractical to do so.

- c. When in port, food service garbage grinders shall be diverted to the MSD system for discharge ashore.

**19-3.3.4 Exceptions.** Navy ships may discharge minimal quantities of sewage within 0-3 nm of shore, but only under certain circumstances and with due consideration for environmental effects. Because certain State or local water quality authorities may require notification of sewage or graywater discharges, ships shall coordinate reporting requirements through fleet and port environmental coordinators. Ships may discharge sewage overboard within 3 nm of shore only under the following conditions:

- a. The ship's holding capacity is insufficient because transit time through the zone 0-3 nm from shore is of long time duration. The ship shall minimize any necessary sewage discharge and shall pump out as far as possible from land.

- b. The ship is conducting or participating in military operations or exercises (including training or readiness evolutions) within the zone 0-3 nm from shore, and terminating operations to offload sewage pier-side or beyond 3 nm from shore would impair operational effectiveness or the mission.

- c. The ship is at anchor or moored where sewage reception facilities or services are not reasonably available, or where use of such services or facilities is not feasible because of foul weather, poor visibility, or unsafe environmental conditions, and where on board retention of sewage is not practicable.

- d. The ship's MSD is inoperable because of equipment malfunction or maintenance, its use would interfere with an overhaul or repair effort, or its use would pose a hazard to the health or welfare of the crew. Ships shall minimize those periods prompting use of this exemption.

Ships shall discharge any sewage underway under this section as far as possible from shore. If in port, the ship shall obtain the concurrence of the shore activity environmental manager before the overboard discharge of sewage.

**19-3.4 Training.** Ships shall train personnel who operate or maintain sewage and graywater disposal or transfer equipment on the proper procedures for sewage or graywater disposal, including hookup and transfer of sewage or graywater to shore facilities and at sea discharge restrictions. All personnel who operate or maintain sewage or graywater disposal equipment shall complete the Shipboard Sewage

Collection, Holding, Transfer (CHT), and Treatment PQS, NAVEDTRA 43199-D, prior to assignment to those duties.

## **19-4 Air**

### **19-4.1 Legislation (This section contains background material from which Navy policy is derived).**

a. The Clean Air Act (CAA) authorizes State and local governments to set standards for emissions of air pollutants. Federal law requires Federal agencies to comply with Federal, State, interstate and local air pollution requirements. Although most air pollution regulations address shoreside sources, Navy ships operating within U.S. and State waters may also be subject to certain regulation.

b. Reference (b) (NESHAP for Shipbuilding and Ship Repair) considers ship's force coating operations as an EPA-regulated activity when a ship is pier side at an affected source. "Affected source" is an EPA determination and, therefore, affects both Navy shore activities (shipyards and naval stations) and private ship repair facilities. The shore activity is required to include information about marine coating use by ship's force in their semi-annual reports.

For ships at affected source sites, reference (b) imposes recordkeeping requirements, proscribes use of certain types of paint, and restricts use of paint thinners.

Despite the applicability of the requirement, EPA headquarters has recommended that regional EPA offices grant waivers to relieve Navy activities classified as affected source sites of the requirement to record and report ships' force marine coating use on "operational ships" (all ships other than those in an overhaul availability). Overhaul is a depot level maintenance availability that occurs at Navy or commercial shipyards. EPA will not automatically grant waivers. The Navy must apply to EPA regional offices to obtain them. Therefore, recordkeeping and reporting requirements will be administered and enforced on a variable basis by EPA regions and state environmental agencies.

### **19-4.2 Terms and Definitions**

**19-4.2.1 Affected Source.** A major source of Hazardous Air Pollutants (HAPs) that emits more than 25 tons/year of HAPs aggregate or more than 10 tons/year of any single HAP and uses at least 264 gallons of marine coating per year.

**19-4.2.2 Coating.** Any material that can be applied as a thin layer to a substrate and which cures to form a continuous solid film. Coatings include paints, primers, varnishes, lacquers, etc. Marine coatings meeting this definition are regulated under reference (b).

**19-4.2.3 Domestic.** Within the United States, its possessions, and territories.

**19-4.2.4 General Use Coating.** Any coating that is not a specialty coating. Marine coatings meeting this definition are regulated under reference (b).

**19-4.2.5 Volatile Organic Compounds (VOCs).** Photochemically reactive organic compounds that evaporate readily under normal temperature and pressure conditions. As a result of the tendency to evaporate readily, VOCs are primary contributors to the formation of ground level ozone.

### **19-4.3 Navy Policy**

**19-4.3.1 Compliance with Regulations.** Navy ships shall comply with applicable Federal, State and local regulations governing air pollution emissions.

**19-4.3.2 Shipboard Procedures.** Ships shall follow these procedures:

a. Navy ships at pierside shall implement operation and maintenance procedures to prevent stack emissions in violation of State and local regulations. Specifically, Navy ships shall comply with regulations on the opacity of smoke during normal operation of boilers and special periods, such as lighting off, securing, baking out, or testing of boilers.

b. In port, Navy ships shall minimize operation of boilers and diesel engines by using shore-provided "hotel" services whenever operational requirements permit. Ships shall limit blowing of boiler tubes in port to the minimum necessary to conform with provisions of reference (c), chapter 221.

c. Ships shall use only approved solvents, paints, fuels, lubricants and chemicals on board. Reference (d) includes a list of materials prohibited on ships. The Ships Hazardous Material List (SHML) or the Submarine Material Control List (SMCL) contains nomenclature of HM approved for use aboard ship. For submarines, additional restrictions may apply to solvents, paints, fuels, lubricants and other chemicals per the Nuclear Powered Submarine Atmosphere Control Manual (S-9510-AB-ATM-010/(U)).

d. Only properly trained personnel equipped with appropriate personal protective equipment shall perform shipboard emergency or operational readiness repairs on thermal insulation containing asbestos. See reference (d), chapter B1 for guidance. This reference also discusses other asbestos work, including the removal of asbestos-containing deck tiles, replacement of asbestos-containing gasket/packing material and preventive maintenance on asbestos-containing brake assemblies. Ships shall properly containerize any asbestos material removed during shipboard repair actions performed by ship's force and dispose of it without release of asbestos fibers into the environment (see reference (d), chapter B1). In preparation for disposal ashore, repair personnel must adequately wet asbestos residue before double bagging it in heavy-duty (6 mil thickness) plastic bags or other suitable impermeable containers. Repair personnel shall provide standard asbestos danger labels on all bags or containers containing asbestos material. Other applicable laws, regulations and contract requirements govern asbestos removal by Navy shore facilities or contractors.

e. Navy and COMSC ships with AC&R systems with an installed refrigerant charge of more than 50 pounds that contain ODSs such as CFC-11, CFC-12, or CFC-114 or ODS substitute material such as HFC-134a or HFC-236fa shall meet the following annual performance goals:

(1) Maintain maximum annual leakage rate of no more than 15 percent of total installed refrigerant charge of air conditioning equipment.

(2) Maintain maximum annual leakage rate of no more than 35 percent of total installed refrigerant charge of ship stores and cargo refrigeration.

f. Ships shall recover ODSs prior to maintenance on air conditioning and refrigeration systems and fire protection systems. Navy personnel shall not intentionally release chlorofluorocarbons (CFCs) or halons during the servicing, maintenance, repair and disposal of any AC&R or firefighting equipment. Only maintenance personnel trained per paragraph 19-4.3.3 shall perform maintenance on equipment containing such substances. Under these procedures, maintenance personnel shall use only approved procedures for minimizing loss of ODSs, regardless of the ship's location.

g. Navy personnel who perform maintenance on shipboard AC&R systems shall keep records of maintenance actions, names of technicians performing work, pounds of refrigerant removed and pounds of refrigerant added. Ships shall keep records to calculate annual equipment leakage rates addressed in paragraph 19-4.3.2e and retain them for 3 years.

h. Ships shall restrict the use of ODS-containing solvents for shipboard equipment to those procedures specifically required.

i. **ODS Reserve.** The Navy established the ODS reserve to support mission-critical ODS requirements. Shipboard CFC for use in air conditioning and refrigeration systems and halon for use in firefighting systems are mission-critical- designated. The ODS reserve material is set aside for these shipboard systems. Navy ODS Advisory 96-01 (series), produced by NAVSEASYS- COM (SEA 03L) provides procedures for deposits to and requisitions from the reserve. CNO (N45), COMNAVSEASYS COM, COMNAV- AIRSYSCOM, COMSC and Fleet CINCs monitor requisitions from the ODS reserve.

j. **Shipboard Galley Equipment.** Class I ODS refrigerants used in shipboard galley equipment were phased out of production on 31 December 1995. Existing supplies are limited. Ships shall replace existing equipment with new equipment when it is no longer usable or repairable. Replacement equipment must be EPA-approved (complying with their significant new alternatives policy (SNAP) program) and must use a refrigerant with an ozone depletion potential (ODP) of 0.05 or less. Replacement equipment must also meet safety and health criteria. NAVSEA Catalog S6161-Q5-CAT-010 lists replacement equipment. Ships are authorized to use material from the ODS reserve to support galley equipment until the year 2005. After that date, ships will satisfy any remaining material requirements through local sources.

k. **Shipboard Marine Coating Use**

(1) Since the EPA does not consider all shore activities to be "affected sources", Navy activities and SUPSHIPS shall notify ships of their reporting responsibilities prior to entering the activity. Fleet CINCs shall direct Navy activities, at affected sources, to work with the RECs to request recordkeeping waivers from EPA regional offices for ships in "operational status".

(2) Ships in an overhaul availability at Navy NESHAP affected source sites shall maintain records of ships' force marine coating use *for coatings distributed from ships' stores*. The installed

Hazardous Material Inventory Control System (HICS) may be used to keep these records. If regional EPA offices grant appropriate waivers, operational ships located at Navy affected sources sites will *not* be required to maintain records of ship's force marine coating use. Ships' force, however, shall record and report coating use when located at commercial affected source sites (e.g., private shipyards and maintenance facilities) regardless of availability type or operational status.

(3) Ship Recordkeeping and Reporting Requirements. When requested by the Navy activity or SUPSHIP, ships must record and report marine coating used each day. Records shall include the following information: (the Hazardous Material Inventory Control System (HICS) may be used to track this information.)

- (a) Coating Type (e.g. general use, non-skid, special marking, etc.)
- (b) Color
- (c) National Stock Number (NSN)
- (d) Manufacturer Name and/or Commercial and Government entity (CAGE) code
- (e) Manufacturer product name
- (f) Manufacturer part number
- (g) Volume of coating used
- (h) VOC content of coating
- (i) Coating certification (when available)
- (j) Date used.

Records shall be provided by the seventh day of the month for the previous month, and/or prior to departure.

**Figure 19.3**

<b><u>Application</u></b>	<b><u>EPA VOC Limit (Metric)</u></b>	<b><u>Conversion (U.S.)</u></b>
Air Flask	(340 g/l)	(2.53 lbs/gal)
Antenna	(530 g/l)	(4.42 lbs/gal)
Antifoulant	(400 g/l)	(3.33 lbs/gal)
Heat Resistant	(420 g/l)	(3.33 lbs/gal)
High Gloss	(420 g/l)	(3.50 lbs/gal)
High-Temperature	(500 g/l)	(4.17 lbs/gal)
Inorganic Zinc		
High-Build Primer	(340 g/l)	(2.53 lbs/gal)
Military Exterior	(340 g/l)	(2.83 lbs/gal)
Mist	(610 g/l)	(5.08 lbs/gal)
Navigational Aids	(550 g/l)	(4.50 lbs/gal)
Nonskid	(340 g/l)	(2.83 lbs/gal)

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Nuclear	(420 g/l)	(3.50 lbs/gal)
Organic Zinc	(360 g/l)	(3.00 lbs/gal)
Pre-Treatment Wash Primer	(780 g/l)	(6.50 lbs/gal)
Repair and Maintenance of Thermoplastic Coating	(550 g/l)	(4.58 lbs/gal)
Rubber Camouflage	(340 g/l)	(2.83 lbs/gal)
Sealant Coat For Thermal Spray Aluminum	(610 g/l)	(5.08 lbs/gal)
Special Marking	(490 g/l)	(4.08 lbs/gal)
Specialty Interior	(340 g/l)	(2.83 lbs/gal)
Tack Coat	(610 g/l)	(5.08 lbs/gal)
Undersea Weapons Systems	(340 g/l)	(2.83 lbs/gal)
Weld-Through Shop Primer	(650 g/l)	(5.42 lbs/gal)
<u>*General Use</u>	<u>(340 g/l)</u>	<u>(2.83 lbs/gal)</u>

\*General use coating is defined as "any coating not defined as a specialty coating".

(4) Restrictions on Marine Coating Use. Ships are responsible for not using materials exceeding permissible volatile organic compound (VOC) limits for applications as listed in figure 19-3. (This information is on the paint can.) If ship's force cannot obtain materials meeting these standards through the Navy supply system, they should contact COMNAVSEASYS COM (SEA03M) for a compliant substitute.

(5) Restrictions on Use of Thinners. Ship's forces are prohibited from thinning marine coatings with anything except water. Ships shall label paint lockers with a placard stating, "Thinning of marine coatings/paints is prohibited."

(6) Marine Coating Certification. Infrequently, ships and shore activities may direct purchase select marine coatings from the domestic open market (commercially) due to mission necessity. Marine coatings bought on the domestic open market shall meet reference (c), chapter 631 VOC content standards and certification criteria.

(7) Ships shall implement the following marine coating work practices: (a) minimize spills of marine coatings, (b) insure marine coating containers are intact and leak-free and (c) insure marine coating containers are closed when not in use.

### 19-4.3.3 Training

a. Ships shall train personnel whose watch duties may result in air pollution (for example, diesel engine operators, boiler men, or gas turbine operators) in the minimization of air pollution as a part of their watch qualification.

b. Ships shall train personnel whose task assignments may result in air pollution (for example, topside painters or users of volatile solvents) on the proper use of the material prior to performing the task, to minimize the release of pollutants.

c. All Navy AC&R technicians who perform maintenance on air conditioning and refrigeration equipment shall attend EPA certified training on handling, recovery and recycling ODS. Ships shall provide these personnel with training on ODS regulations as well as spent/recyclable ODS labeling prior to assigning them to perform these duties.

d. Ships shall train personnel who work with other ODSs (e.g., halons and solvents) or perform maintenance on equipment containing such substances on methods to prevent release prior to assigning them to such work.

e. Personnel assigned to operate the incinerator shall complete the Incinerator Operator PQS, NAVEDTRA 43558, prior to assignment.

## **19-5 Oil and Oily Waste**

### **19-5.1 International Convention and Legislation**

**19-5.1.1** Annex I of MARPOL addresses oil pollution from ships at sea. Annex I establishes "special areas" in which all discharge of oil or oily mixture from oil tankers and other ships in excess of 400 gross tons is prohibited. This prohibition does not apply to the discharge of processed bilge water from machinery spaces provided all of the following conditions are met:

- a. The ship is proceeding en route.
- b. The oil content of the overboard discharge without dilution does not exceed 15 parts per million (ppm).
- c. The ship has in operation oil filtering equipment that will alarm if an output of greater than 15 ppm is exceeded (ships greater than 10,000 tons).
- d. The filtering system is equipped with a stopping device that will ensure that the discharge is automatically stopped if the effluent oil content exceeds 15 ppm.

Annex I special areas in effect include the Mediterranean Sea, the Baltic Sea, the Black Sea, and the Antarctic area. Annex I limits the oil content of discharges from ships into all other ocean areas of the world at 15 ppm. Annex I requirements do not apply strictly to warships, but party states (including the U.S.) are required to establish standards for their warships that require such vessels to conform as closely as practicable with the international standard, without compromising operational effectiveness.

**19-5.1.2** The Act to Prevent Pollution from Ships (APPS) implements the stringent oil and oily waste discharge requirements of Annex I of MARPOL. Although public vessels are not strictly subject to MARPOL Annex I, the Act requires heads of Federal departments to prescribe standards for ships under their authority that are consistent with those of the MARPOL Protocol "so far as it is reasonable and practicable without impairing the operations or operational capabilities of such ships." APPS applies to U.S. vessels worldwide.

**19-5.1.3** The Clean Water Act prohibits the discharge of oil in a harmful quantity into all waters within 12 nm of the U.S. coast. U.S. EPA regulation provides that a discharge of oil in a harmful quantity is one that violates applicable water quality standards or causes a sheen on the water. The oil content within a discharge that is sufficient to cause a sheen varies with type of oil, sea state, lighting, and viewing angle. In general, in excess of 15 to 20 ppm of oil may be sufficient to cause a sheen.

## **19-5.2 Terms and Definitions**

**19-5.2.1 Bilge Water.** A mix consisting primarily of water, with some oil (normally less than 5 percent) and other unspecified substances, resulting from the normal operation of a vessel. Bilge water is considered an oily waste. Under normal circumstances, bilge water does not contain HM or other constituents that would classify it as a hazardous waste.

**19-5.2.2 Oil.** For the purposes of compliance with MARPOL and the Act to Prevent Pollution from Ships, the term “oil” refers to any petroleum-based fluid or semisolid, including crude oil, liquid fuels (like gasoline, kerosene, diesel), lubricating oil, waste oil, oil sludge and oil refuse. Oil also includes synthetic-based lubricating and transmission products. MARPOL, Annex II classifies non-petroleum-based oils, such as vegetable oils, as noxious liquid substances.

For the purposes of Clean Water Act compliance, the term “oil” refers to oil of any kind or in any form, including petroleum, fuel oil, sludge, oil refuse, vegetable oil, and oil mixed with waste other than dredge spoils.

**19-5.2.3 Oily Rags.** Cleaning rags or other sorbents contaminated with oil as defined in paragraph 19-5.2.2. Does not include sorbents contaminated with vegetable oils, liquid or solid shortening, or animal fat/lard used in food preparation.

**19-5.2.4 Oily Waste.** Oil mixed with water or other fluids such that the mixture is no longer useful.

**19-5.2.5 Reclamation.** The processing of used oil to recover useful oil products.

**19-5.2.6 Sheen.** An iridescent appearance on the surface of the water.

**19-5.2.7 Used Oil.** Oil whose characteristics have changed since being originally refined but which may be suitable for future use and is economically reclaimable. Used oil excludes synthetic-based lubricating and transmission products.

**19-5.2.8 Waste Oil.** Oil whose characteristics have changed markedly since being originally refined and has become unsuitable for further use, and is not considered economically recyclable.

**19-5.3 Requirements.** Chapter 9, Oil Management Ashore, requires shore activities to develop an Oily Waste/Waste Oil (OW/WO) Management Plan. These plans are required to include activity-specific policies for collecting, treating, and disposing of bilge water from naval vessels and other shipboard and shoreside oily wastes. These plans are required to be consistent with the policy set forth in this section. They will address the management of shipboard OW/WO from ships where oil/water separators (OWSs) and oil content monitors (OCMs) are either not installed or installed, but not operational. Although the format of the plan is not specified, it may be in the form of an activity or naval base directive with which ships will be required to comply.

## **19-5.4 Navy Policy**

### **NOTE:**

When seeking to comply with international and US oil discharge regulations,

commanding officers should be aware that the definition of oil may not be consistent worldwide. For example, a discharge of vegetable oil that causes a sheen, while not a violation of MARPOL Annex I, is a violation of the U.S. Clean Water Act.

**19-5.4.1 Clean Water Act Compliance.** In compliance with the Clean Water Act, no discharge that produces a sheen is permitted within the territorial sea and contiguous zone of the U.S.

**19-5.4.2 APPS Compliance.** Ships operating in MARPOL Annex I special areas (Mediterranean Sea, Black Sea, Baltic Sea, and the Antarctic area) shall refrain from discharging any oil or oily waste to the extent practicable without endangering the ship or impairing its operations or operational effectiveness. Oil and oily waste discharges that are necessary in Annex I special areas or elsewhere on the high seas shall comply with the requirements listed below. Refer to paragraph 19-5.4.4 for operational and management requirements.

- a. **Surface Ships With Oil/Water Separators (OWSs) and Oil Content Monitors (OCMs).** Navy ships equipped with OWS and OCM shall attempt to limit oil and oily discharges to 15 ppm oil worldwide. OWSs will generally operate more effectively if the processed oily waste does not contain mechanical emulsions generated by shipboard equipment, chemical emulsions produced by detergents or other emulsifying agents and/or solid waste that could clog the OWS. If operating conditions prevent achieving less than 15 ppm, limit discharges to less than 100 ppm and only when beyond 12 nm from the nearest land.
- b. **Ships With OWSs or Bilge Water Processing Tanks (BWPTs) But Without OCMs** shall process all machinery space bilge water through an OWS or BWPT before discharge.
- c. **Surface Ships Without an Operating OWS But With an Oily Waste Holding Tank (OWHT)** shall, to the maximum extent possible, without endangering the ship or impairing its operations or operational effectiveness, direct all oily bilge water to the OWHT for shore disposal. Discharges are permitted beyond 50 nm from the nearest land if operating conditions are such that oily bilge water must be disposed of at sea. The ship shall pump the bottom, water phase overboard and ensure that the upper, oily phase is not pumped, except to a shore collection facility. Such discharges of oily bilge water shall take place only while the ship is underway.
- d. **Surface Ships With Neither an Operating OWS nor OWHT** shall retain all oily bilge water for shore disposal to the maximum extent possible, without endangering the ship or impairing its operations or operational effectiveness. Discharges are permitted beyond 50 nm from the nearest land if operating conditions are such that oily bilge water must be disposed of at sea. Such discharges of oily bilge water shall take place only while the ship is underway.
- e. **Submarines Without BWPTs.** When bilge water is to be discharged, after allowing for adequate separation time, submarines shall pump the bottom, non-oily water phase of bilge water overboard. The non-oily, water phase of bilge water shall not be pumped overboard within 50 nm except when the operations or operational capabilities of the submarine would be impaired by this requirement. In this case, the non-oily, water phase should be pumped as far from shore as practicable. In any case, the oily phase shall be held onboard and pumped to a shore collection facility. Submarines shall ensure this policy is met by written procedure.

**19-5.4.3 Shipboard Equipment.** The Navy shall install the following equipment/systems on ships to allow proper segregation and collection of shipboard waste oil:

- a. OWSs, OCMs, OWHTs, and waste oil tanks (WOTs) to allow adequate processing of shipboard oily waste prior to its discharge overboard and to allow proper segregation and collection of shipboard waste oil; including oily waste ultrafiltration polishing systems installed on some new construction ships
- b. Bilge pumps (oily waste transfer pumps), piping risers, and weather-deck connections to allow safe and convenient ship-to-shore transfer of oily waste
- c. Cam-lock discharge connections, 2-1/2-inch (MS 27023-14), for OW/WO discharge to allow quick connect/disconnect with shoreside offloading hoses
- d. OW/WO adapters to accommodate hoses with standard International Maritime Organization (IMO) flanges for use by Navy ships visiting foreign or non-Navy ports
- e. Mechanical seals on appropriate shipboard pumps to minimize the quantity of oily wastewater collected in ship bilges
- f. Improved tank level indicators to reduce the potential for overboard spills during fueling and oil and oily waste handling and transfer operations
- g. Contaminated fuel settling tanks to receive and assist reclamation of fuel tank strippings that might otherwise be discharged overboard
- h. Oil-water interface detectors, cargo tank cleaning systems, and where appropriate, segregated ballast tanks on oilers and oil tankers.

All oil pollution abatement equipment/systems shall be inspected prior to the issuance of a user's certificate to verify proper installation and operation.

**19-5.4.4 Operational and Management Requirements.** Shipboard operational and management requirements for bilge water, oil, oily waste, and shipboard oil pollution abatement are described in the following paragraphs. Reference (c), chapter 593, section 3 provides detailed procedural instructions implementing these requirements.

a. **Bilge Water and Oily Waste.**

(1) Bilge water and oily waste minimization. Ships shall minimize oil contamination of bilge water. Mechanical seals in oil and water pumps and proper segregation of oily and non-oily wastewater will greatly reduce the generation of oily waste.

(2) Contaminated bilge water and oily waste. Ships shall not use bilge cleaners or chemical agents that promote chemical emulsion (i.e., detergents and surfactants) for machinery space cleaning. Prohibition of these substances will enable OWSs to perform more effectively. NAVSEASYS COM recommends short-lived detergents for bilge cleaning. In port, ships shall offload oily waste containing chemical emulsion agents or contaminants from other than routine sources of bilge water to shore receiving facilities. If oily waste has become contaminated from other than routine sources, such as aqueous film-forming foam (AFFF), solvents, anti-freeze, or other HM, ships shall advise the receiving

shore facility prior to offload. Since some States may consider bilge water to be contaminated, ships in those States shall consult with the host receiving facility for collection and discharge requirements.

Chapter 9 requires shore activities to periodically sample/test bilge water and other OW/WO batches to see if the waste contains any material that would classify it as hazardous. If it exceeds established standards, the shore activity must manage it as a hazardous waste. The activity OW/WO Management Plan will provide sampling protocols and procedures and require actions to trace and eliminate the source of any contamination in the OW/WO. Activities will determine the frequency of testing by referencing the historic characteristics of samples and the level of confidence in the consistency of samples. Ships shall comply with shore activity established bilge water and oily waste sampling requirements.

(3) Bilge water and oily waste disposal in port. Navy policy is to maximize separation, recycling, and reuse of oil. While in a Navy port, ships shall dispose of bilge water and oily wastes per supporting activity guidance using one or more of the following approaches:

(a) Permanent shore reception facilities. In Navy ports that provide shore oily waste collection, shoreside collection of bilge water and oily wastes followed by recovery of recyclable products is the preferred method of dealing with these shipboard wastes.

(b) OWS system. Ships equipped with bilge water OWS and OCM systems may use them, provided the effluent does not exceed 15 ppm, cause a sheen, or violate any other applicable water quality standard. Prior to discharging in a Navy port via an OWS, ships shall consult with the supporting shore facility host command for discharge requirements. In non-Navy ports, use of the OWS is the preferred method of dealing with these wastes.

(c) Ship waste offload barges (SWOBs). Supporting shore activities shall operate SWOBs per reference (e) and their OW/WO Management Plan. Ships not equipped with an operable OWS shall use waste oil collection lines ashore, if available, or shall discharge to a SWOB.

(4) Emergency dewatering. Ships shall not use eductors to dewater bilges containing oily waste, except in emergency situations when OWS systems (including OWHTs) are not available or are not of sufficient capacity to handle the immediate flow requirements. If a ship must use an eductor, it shall make every effort to discharge beyond 12 nm from land and while underway. The ship shall make an engineering log entry concerning eductor use to discharge bilge waste overboard.

**b. Waste/Used Oil**

(1) Shipboard personnel shall make maximum use of available port facilities for disposal of all waste/used oil products prior to departing from and upon returning to port. Those facilities include SWOBs, pierside collection tanks, tank trucks, bowsers, and contaminated fuel barges.

(2) Shipboard personnel shall collect, store separately and label used lubricating oils for eventual shore reclamation. They shall not discharge lubricating oils into the bilge, OWHTs or WOTs.

(3) Shipboard personnel shall collect synthetic lube oils and hydraulic oils separately from other used/ waste oils. Ships that do not have a system dedicated to collect used synthetic oils shall use 5- or 55-gallon steel containers, properly labeled per reference (f) for eventual shore recycling. All

personnel handling synthetic oil shall wear protective clothing, as specified in material safety data sheets (MSDSs).

(4) Ships shall retain containers (such as drums, cans, etc.) in which oil products were originally packaged and properly label them per reference (f) for storing and transferring oil ashore.

c. **Fuel Transfer.** Ships shall fuel, defuel, transfer fuel internally, and offload oil in restricted waters during normal daylight working hours, when operating schedules permit. They shall conduct these evolutions with well-trained personnel (see paragraph 19-5.5). They shall observe the following precautions to minimize oil spills:

(1) Maintain topside watches at all locations of possible spills and rig direct communication to fuel transfer pump stations.

(2) Establish check-off lists and procedures for valve alignment and transfer operations. Double-check alignment of all transfer system valves.

(3) Use only qualified personnel to perform the detailed transfer procedures.

(4) Continuously monitor each tank level while filling with fuel. Use remote tank-level indicators as the primary method of obtaining tank levels.

(5) Prior to actual fuel transfer, transfer personnel shall inform the responsible ship's officer (commanding officer, command duty officer, or officer of the deck) and the fuel supplier that the ship is ready to commence fueling operations.

d. **Fuel Tank Stripping**

(1) Ships shall not use eductors to strip fuel or cargo tanks.

(2) On ships equipped with fuel tank stripping systems, ships shall discharge the strippings to contaminated fuel settling tanks (CFSTs) for reuse. Ships shall not discharge fuel tank strippings overboard.

(3) CFSTs are for strippings from fuel storage and service tanks only. Ships shall not discharge bilge water and waste or other wastewater into CFSTs.

e. **Compensated Fuel/Ballast Water Systems and OW/WO.** Under normal circumstances, compensated fuel/ballast water is neither OW/WO nor HW. Ships with compensated fuel/ballast systems shall comply strictly with fuel transfer and ballasting procedures to ensure ballast water does not become contaminated with oil or any other waste. Ships utilizing self-compensating fuel tanks shall ensure adequate margin is preserved in tanks to prevent inadvertent discharges of oil with the compensating water. Some State regulations require supporting shore activities to collect and process compensated fuel/ballast water prior to discharge to the environment.

f. **Oil-contaminated Solid Waste**

(1) Ships shall containerize oil and fuel filters and other items coated or soaked with oil for shore disposal. They may weight these items for negative buoyancy and jettison them beyond 50 nm of shore if necessary for safety of ship or health of crew.

(2) If a ship has the necessary equipment, it may process oily rags/sorbents on board.

(a) Ships equipped with marine solid waste incinerators shall not burn heavily soaked oily rags or rags contaminated with hazardous materials. Ships may only dispose of rags that are lightly soiled (i.e., less than 50 percent of the rag surface area wetted and not dripping without wringing) with petroleum products or other non-hazardous liquids via incinerators beyond 12 nm from shore.

(b) Ships equipped with rag recycling machines should process rags for recycling.

(3) Ships should store all rags that are not incinerated or recycled aboard in suitable closed containers designed to contain flammable or combustible materials in a space fitted with adequate ventilation and fire suppression systems.

**19-5.4.5 Exemption From Oily Waste Restrictions.** Exemption from oily waste restrictions may be necessary at certain times and under certain circumstances. Instances of specifically authorized exemptions include the following:

a. While operating in waters beyond 50 nm from land, with shipboard oily waste processing equipment inoperable due to equipment malfunction, a Navy ship may discharge oily bilge water directly to the sea if the on board retention of such water poses a safety hazard. They may conduct the discharge only after a concerted effort has been expended to repair the equipment malfunction. Commanding officers shall minimize discharges under such circumstances. The ship shall duly note the details of a discharge (nature, quantity and geographic location) in the engineering log. Ships shall report equipment casualties that either threaten or result in a discharge of oily water through the Casualty Report (CASREP) system. The initial report shall note the potential for discharge. All subsequent status reports shall report the frequency and approximate amount of actual discharges.

b. A Navy ship may discharge oily waste to the sea in any other situation in which a commanding officer decides that a discharge of such wastes is required to ensure crew or ship safety, or to prevent machinery damage. For example, the ship shall not allow oily bilge water to reach levels that threaten chloride contamination of shipboard condensate systems. Commanding officers shall minimize such

discharges and ensure the recording of details of the discharge (nature, quantity and geographic location) in the engineering log. If such a discharge is necessary within 12 nm from shore, ships shall treat the discharge as an oil and hazardous substance (OHS) spill.

c. While operating in waters beyond 50 nm from land, a Navy ship may discharge directly overboard oily waste from isolated spaces, such as JP-5 pump rooms, if the ship does not have the capability to collect and transfer such waste for processing through the OWS system. Such discharges shall contain only distillate (non-persistent) oils and shall result in discharges of minimal quantities of oily waste.

**19-5.5 Training.** Ships shall train personnel who operate or maintain waste oil and oily waste holding, processing, disposal, or transfer equipment on the proper procedures for oily waste disposal, including hookup and transfer of waste oil and oily waste to shore facilities and at sea discharge restrictions. Personnel assigned to supervise oily waste processing and disposal operations shall complete the Oil Pollution Abatement (OPA) Equipment Operation and Maintenance course, K-652-2196, prior to assuming these duties. All personnel who operate or maintain oil processing, transfer or disposal equipment shall complete the Oil Spill Control and Removal Equipment PQS, NAVEDTRA 43195-B, prior to assignment to those duties.

## **19-6 Hazardous Waste (HW) and Hazardous Material (HM)**

### **19-6.1 Legislation (This section contains background material from which Navy policy is derived.)**

**19-6.1.1** The CWA prohibits the discharge of harmful quantities of hazardous substances (HS) into or upon U.S. waters out to 200 nm.

**19-6.1.2** The Resource Conservation and Recovery Act (RCRA) regulates generation, treatment, storage and disposal of hazardous waste. RCRA provides that HW generated on public vessels is not subject to storage, manifest, inspection or record keeping requirements until the ship transfers such waste ashore or transfers it to another public vessel within the territorial waters of the U.S. and then only after that vessel stores it aboard for more than 90 days after the date of transfer.

**19-6.1.3** Through the Toxic Substances Control Act (TSCA), Federal restrictions govern the manufacture, use, labeling and disposal of polychlorinated biphenyls (PCBs), asbestos and asbestos-containing waste.

**19-6.1.4** Federal law pertaining to national defense requires that contracts for work on board naval vessels (other than new construction) identify the type and amount of HW expected to be generated and responsibility for the disposal. The law further provides that a Navy generator number be used for Navy-generated HW, a contractor generator number for contractor-generated HW, and both a Navy and contractor generator number for HW co-generated by the Navy and the contractor, regardless of who owns the site where the waste is generated. The law further requires naval vessels to offload HW to the maximum extent feasible prior to arrival at a private repair facility.

## **19-6.2 Terms and Definitions**

**19-6.2.1 Hazardous Material.** Any material that, because of its quantity, concentration or physical, chemical or infectious characteristics, may pose a substantial hazard to human health or the environment. In the case of ships, this includes used or excess HM.

**19-6.2.2 HM Contaminated Rags.** Cleaning rags or other sorbents contaminated with solvents, adhesives, paint, or other HM defined in paragraph 19-6.2.1.

**19-6.2.3 Used or Excess Hazardous Material.** HM for which there is no further, immediate use on board the ship possessing the material. Such material may ultimately be used on another ship or within the shore establishment for the same purpose or a purpose other than initially manufactured or by commercial industry. Used HM is material that has been used in a shipboard process. Excess HM is unused material in full, properly sealed containers.

**19-6.2.4 Hazardous Substance.** HM or HW.

**19-6.2.5 Hazardous Waste.** A solid waste or combination of solid wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may:

- a. Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
- b. Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

The term solid waste includes liquid, semi-solid or contained gaseous material.

**19-6.3 Requirements.** Reference (g) establishes policy and assigns responsibilities for HM pollution prevention. It requires that HM be selected, used and managed over its life cycle so that the DOD achieves the lowest costs required to protect human health and the environment. Additionally, State and local regulations prescribe requirements for the proper storage, packaging, labeling, transportation and disposal of HM.

## **19-6.4 Navy Policy**

**19-6.4.1 Shipboard Procedures.** Ships shall follow these procedures in the management of used/excess HM:

- a. Navy ships shall not discharge overboard untreated used or excess HM generated aboard the ship within 200 nm of land unless specifically allowed by appendix L. To the maximum extent practicable, ships shall retain used/excess HM on board for shore disposal. Appendix L provides detailed guidance for HM discharges.
- b. Under no circumstances may a ship collect used/excess HM from other ships or HW from shore facilities and transport it to sea for the purpose of disposal.

c. Reference (d), chapters B3, C23 (surface ships), and D15 (submarines), govern shipboard labeling, handling and storing of HM.

d. Reference (d), chapters C23 and D15; reference (c), chapter 593; and applicable PCB advisories govern shipboard labeling, handling and storing of PCBs and items containing PCBs.

**NOTE:**

Recently, the Navy discovered many uses of PCBs not recognized or authorized by 40 CFR 761. At the direction of CNO, COMNAVSEASYS COM provided guidance on shipboard PCB issues through serialized NAVSEA PCB Advisories (beginning with Advisory 93-1) (reference (h)). Advisories applicable to ships have been incorporated into reference (d). Ships shall implement the PCB requirements of reference (d).

e. Ships shall turn over used HM received from another ship within U.S. territorial waters to a supporting shore activity for processing within 90 days of receipt.

f. To the maximum extent practicable, ships shall remove all HM from a ship before decommissioning, but in no case later than 90 days after decommissioning or removal from service. Any HW created by shipboard operations, preservation or maintenance after decommissioning shall be removed within 30 days of the time it is created.

**19-6.4.2 Ship-to-Shore Transfer.** Ships shall transfer used or excess HM to a shore activity for determination of disposition. If the shore activity determines that used/excess HM has no further use, it will declare the material to be waste and process it per RCRA requirements governing generation of HW.

a. Prior to transfer ashore, ships shall segregate, containerize and label used HM per reference (d), chapters B3, C23 (surface ships), and D15 (submarines). Ships shall fill containers with only one type of HM (i.e., all the used HM in a container shall normally be of only one stock number (except where different stock numbers are issued to specify different sized containers)). Failure to do so may result in a charge to the fleet for laboratory analyses if it is determined that the material will be disposed of as HW. If the contents of the container are unknown, the label shall so state, and the cost of chemical analysis to determine specific content shall be paid out of fleet accounts.

b. When visiting Navy ports, Navy ships shall request used/excess HM pickup by the cognizant shore activity representative (the Hazardous Material Offload Team (HOT) coordinated by the Fleet and Industrial Supply Center (FISC) and including the public works center (PWC). Person-to-person contact is required during the actual transfer of HM to the shore activity. Ship's force shall provide used HM in a suitable container (either the original container or one specified in reference (d), appendix C23-A or D15-C), properly labeled, accompanied by an MSDS (if the material originated outside the supply system or an MSDS is unavailable in the Hazardous Material Information System (HMIS)) and a completed DD 1348-1 at the time of transfer.

c. When visiting non-Navy ports and foreign ports, Navy ships shall offload used HM only when necessary and feasible. The ship shall identify in the LOGREQ the types and amount of used HM to be offloaded. If unable to find adequate facilities at non-Navy ports, the ship shall hold HM for offloading at a Navy port. All HM shall be properly labeled and containerized. If offload is necessary in foreign ports, commanding officers must ensure compliance with applicable customs laws and the SOFA.

d. Prior to entering a private shipyard for an availability, naval vessels (except contractor-operated vessels) shall:

(1) To the maximum extent feasible offload used/excess HM at a Navy or other public facility.

(2) Identify to the SUPSHIP or Port Engineer responsible for the private shipyard, a ship HM coordinator for the availability. Give this individual authority and resources to ensure shipboard compliance with HM and HW management procedures and site specific management practices established by the SUPSHIP or port engineer.

(3) Identify to the SUPSHIP or port engineer during preavailability planning conferences the types and amounts of HW anticipated by ship's force during the availability.

(4) Comply with all established HW and HM management practices and those site-specific procedures delineated by the SUPSHIP or port engineer.

Type commanders responsible for ships in private shipyards for availabilities shall monitor ship compliance with established procedures.

#### **19-6.4.3 Ship-to-Ship Transfers.**

a. Except where used/excess HM is transferred from a tended unit to a tender, ships shall only transfer used HM to another ship during operations that preclude the ship entering a port in which normal offload may occur. Transfers of HM shall be for the sole purpose of returning the material to a supporting shore activity. Ships shall offload all used HM within 5 working days of arrival at a U.S. Navy port.

b. Prior to transfer to the receiving ship, ships shall properly segregate, containerize and label used HM per reference (d), chapters B3, C23 and D15. Responsibility for packaging, documentation and labeling shall rest with the originating ship.

c. After receiving used HM within U.S. territorial waters from another ship for eventual shore processing, the receiving ship shall offload that material to a shore facility within 90 days of receipt. This includes transfer from another ship while in port. For information on shore activity requirements, see paragraph 12-5.2.1.

**19-6.4.4 Transporting Shore-Generated Hazardous Waste Aboard Ship.** Navy ships shall not accept HW from shore facilities in the U.S. for transportation to another location. Navy ships may accept HW from a shore activity outside the U.S. for transportation to the U.S. or to a foreign country only when specifically tasked by competent authority. The authority shall include specific instructions on procedures to be used to ensure proper notice to the receiving authorities and compliance with applicable laws and regulations at the destination.

**19-6.5 Training.** Reference (d), chapter B3, provides training requirements for personnel handling, storing and disposing of HM.

#### **19-7 Solid Waste**

**19-7.1 International Conventions and Legislation (This section contains background material from which Navy policy is derived.)**

**19-7-1.1 MARPOL.** Annex V of MARPOL addresses shipboard solid waste discharge at sea. Annex V establishes three major requirements:

- a. No plastic discharges at sea worldwide.
- b. Outside of special areas, ships shall not discharge solid waste within 3 nm from shore. Ships may discharge comminuted, pulped, or ground wastes including food wastes, paper, rags, or glass whose discharge is able to pass through a screen with a mesh size no larger than 25 mm between 3 and 12 nm from shore. They may discharge non-floating solid waste beyond 12 nm from shore. Ships may discharge floating waste beyond 25 nm from shore.
- c. Within special areas, food waste is the only solid waste discharge authorized. Ships may discharge food waste beyond 12 nm from shore. To date, three special areas are in effect internationally: the Baltic Sea, the North Sea and the Antarctic Region (south of 60 degrees south latitude).

**NOTE:**

MARPOL Annex V special areas and special areas that are in effect are not necessarily the same as those specified in MARPOL Annex I.

The MARPOL Convention provides that the above Annex V requirements do not strictly apply to warships. Party states (including the U.S.) must, however, establish standards for their warships that require such vessels to conform as closely as practicable with the international standard, without compromising operational effectiveness.

**19-7.1.2 Act to Prevent Pollution from Ships (APPS).** APPS implements MARPOL Annex V for the U.S. APPS requires that U.S. public vessels, including warships, to comply with MARPOL Annex V requirements by established deadlines: Surface ships must comply with the plastic discharge prohibition not later than 31 December 1998 and with the special area limitations by 31 December 2000. Once surface ships are equipped with plastic processors, surface ships must immediately comply with the plastic discharge prohibition. Submarines must comply with both the plastic discharge prohibition and the special area requirements after 31 December 2008. However, APPS permits U.S. Navy ships to discharge in MARPOL Annex V special areas in the following manner:

- a. Ships may discharge a slurry of seawater, paper, cardboard or food waste capable of passing through a screen with openings no larger than 12 millimeters in diameter outside 3 nm from land.
- b. Ships may discharge metal and glass that have been shredded and bagged to ensure negative buoyancy outside 12 nm from land.

**19-7.1.3 Ocean Dumping Act (ODA).** ODA prohibits U.S. entities from transporting material from the U.S. or from any other place for the purpose of dumping it into ocean waters, unless a permit has been obtained from the U.S. EPA. ODA does not apply to waste that is generated aboard ships while underway.

**19-7.1.4 Clean Water Act.** Prohibits the discharge of pollutants (including solid waste) from ships into waters of the U.S. within 3 nm from shore. (Discharge of solid waste pollutants beyond 3 nm from shore is regulated under APPS.)

**19-7.1.5 Other Statutes.** Various statutes authorize the U.S. Department of Agriculture (USDA) to regulate the handling of foreign food and foreign source garbage entering the U.S. via ship and aircraft. U.S. Navy ships must comply with those regulations.

## **19-7.2 Terms and Definitions**

**19-7.2.1 Foreign Source Garbage.** Goods, food wastes, wrappers, containers and disposable materials originating in any foreign country (excluding Canada) or Hawaii, Puerto Rico, U.S. Virgin Islands, American Samoa, Guam and the Trust Territories of the Pacific Islands.

**19-7.2.2 Food Waste.** Spoiled or unspoiled victual substances, such as fruits, vegetables, dairy products, meat products, food scraps and food particles.

**19-7.2.3 Garbage.** For consistency with international law, this chapter adopts the MARPOL Annex V definition of garbage: All kinds of victuals and domestic and operational waste generated during the normal operation of the ship. The MARPOL term "garbage" therefore encompasses shipboard solid waste, including plastics, food waste and dry waste such as paper, cardboard and wood, traditionally referred to as "trash."

**19-7.2.4 Pulped Garbage.** Pulped, ground or comminuted garbage capable of passing through a screen with openings no greater than 12 millimeters (0.47 inch).

**19-7.2.5 Plastic Processor.** A device that melts, compresses and sanitizes plastic waste so that it can be efficiently and safely stored aboard ship for shore disposal. The Navy installed plastic processors in most Navy surface ships (excluding those operating at the direction of COMSC) before 31 December 1998, requiring them to meet the plastics discharge prohibition following installation.

**19-7.2.6 Special Area.** A sea area where, for recognized technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic, enhanced efforts are required to minimize pollution from ships. The IMO designates Annex V special areas. Their designation becomes effective internationally after IMO determines that littoral nations have sufficient capacity to manage the potential waste from ships after special area status becomes effective. Three Annex V special areas are in effect: the Baltic Sea, the North Sea and the Antarctic Area (south of 60 degrees south latitude). Other Annex V special areas are designated but not yet in effect are: Mediterranean Sea, Black Sea, Persian Gulf, Red Sea and Wider Caribbean Area.

**19-7.3 Requirements and Navy Policy.** Requirements applicable to garbage discharge at sea include both legal requirements and requirements that the Navy has adopted as a matter of policy to enhance

protection of the marine environment. For ease of comprehension, the legal requirements and the requirements of Navy policy regarding shipboard solid waste discharges have been combined below.

### 19-7.3.1 Plastic Discharges

a. Ships shall minimize the volume of plastic material taken to sea that may become waste while at sea. They shall replace plastic disposable items with non-plastic items where possible. If appropriate, ships shall remove plastic wrapping and shipping materials from supply items before bringing them on board. They shall minimize the amount of plastic supplies used.

#### NOTE:

The Navy will increasingly use plastic CD-ROM disks for distribution of directives. When superseded, they become plastic wastes and ships at sea shall dispose of them as such.

b. When available, ships should use combat logistics force (CLF) ships (including COMSC ships) to transfer plastic waste ashore rather than disposing of it overboard per paragraph 19-7.3.1c. If transferring processed or non-food contaminated plastic waste to another ship, ships shall observe the following practices:

(1) The sending ship shall contact the receiving ship to determine if space is available to accommodate the plastic waste. The sending ship shall not transfer waste without the receiving ship's concurrence.

(2) The sending ship shall transfer only processed or non-food contaminated plastics. Ships shall develop procedures to ensure that packages for transfer do not contain articles such as food contaminated plastics, other trash, garbage and hazardous material.

(3) The sending ship shall package the plastic waste to permit safe handling by both the sending and receiving ships. Securely banded triwalls are the preferred method of transferring processed or non-food contaminated plastic waste. If compactors are installed aboard, ships should compact plastic waste prior to packaging.

(4) Ships shall clearly mark the content of processed or non-food contaminated plastic waste packages on the outside.

c. **Surface Ship Plastic Retention.** Discharges of plastics to the marine environment from Navy surface ships are prohibited by law. Ships with an inoperable plastics waste processor may discharge plastics overboard outside 50 nm from land only to secure the safety of the ship, health of the crew, or save a life at sea. The ship shall make such discharges in weighted bags only after making an effort to repair the equipment malfunction. Commanding officers shall minimize the amount of plastics discharged under these circumstances. The commanding officer shall note the details of such a discharge (date, time, and location of discharge, approximate weight and cubic volume of the discharge, and nature of the material discharged) in the Ship's Deck Log. Ships shall report equipment casualties that either threaten or result in a discharge of plastics through the CASREP system. The initial CASREP shall note the potential for discharge. The ship shall report the commencement of plastics discharges to the appropriate operational commander.

d. **Submarine Plastic Discharge Requirements.** Submarines shall limit plastics discharges to the minimum amount practicable. Buoyant garbage discharges from submarines are prohibited.

e. **Plastic Discharge Record Keeping.** Surface ships or submarines shall record any discharge of plastic in the Ship's Deck Log. See paragraph 19-7.3.1c for details.

f. **Release of Military Equipment Containing Plastic.** The plastic retention requirements apply only to disposal of plastic waste. These requirements do not apply to normal use of expendable military equipment that contains plastic, such as targets, weather balloons, sonobuoys, etc., because the plastic in these items is not considered "waste" when normal use of the items results in their release into the ocean. However, in keeping with Navy policy to protect the marine environment, expendable items that can be retrieved after use, particularly targets, should be retrieved, if safe and practicable to do so. Once collected after use, plastic components of such items should be regarded and managed as plastic waste.

**19-7.3.2 Non-Plastic Garbage Discharges.** All references to "garbage" within this subsection refer to non-plastic garbage discharges.

a. No garbage discharges shall occur within 3 nm of any coastline.

b. Ships equipped with an operable pulper shall use it worldwide. Ships shall limit the discharge of pulped food products, paper and cardboard to beyond 3 nm of any coastline. Ships may discharge pulped garbage into shipboard MSDs only when a ship is docked and the MSDs are discharging to pier facilities. Ships shall not use garbage pulpers within 3 nm of any coastline in order to maximize necessary sewage holding capacity and thus reduce the risk of inadvertent overboard discharges of sewage.

c. Ships equipped with an operable shredder shall use it worldwide. They shall limit the discharge of shredded glass and metal products that are contained in a sinkable, burlap bag to beyond 12 nm from any coastline.

**NOTE:**

Fluorescent light bulbs contain a small amount of mercury and shall not be shredded, but shall be retained for shore disposal (see appendix L). Ships equipped with a fluorescent bulb crusher shall retain debris for shore disposal.

d. If a ship does not have pulper/shredder equipment or this equipment is inoperable, it may discharge unprocessed garbage beyond 25 nm from any coastline. Surface ships shall use available means to cause unprocessed garbage to sink as rapidly as possible. When required to make unprocessed garbage discharges to an in effect special area, the commanding officer shall note the details of such a discharge (date of discharge, special area involved, and nature and amount of discharge) in the ship's Deck Log. Ships shall report equipment casualties that either threaten or result in a discharge of unprocessed garbage to an in effect special area through the CASREP system. The initial CASREP shall note the potential for discharge. Reports of such discharges will be made to CNO (N45) per paragraph 19-7.3.3.

e. Submarines may discharge compacted, sinkable garbage between 12 nm and 25 nm from land, provided that the depth of water is greater than 1,000 fathoms. When greater than 25 nm from land, direct discharge is permitted.

f. Surface ships equipped with incinerators may use them when operating beyond 12 nm from land for the disposal of non-plastic and non-hazardous garbage only.

g. Transporting any material to sea for the purpose of dumping requires a permit from the U.S. EPA. In most cases, obtaining a permit is a complex undertaking and beyond the capability of afloat units. To ensure compliance with ODA, Navy ships are prohibited from taking on any material in port for the purpose of dumping it at sea unless permission has been obtained from CNO (N45).

h. Although the at-sea disposal of garbage by ships is permissible (as indicated above), international guidelines encourage the use of port reception facilities as the primary means of shipboard garbage disposal, whenever practical. This means that surplus materials that can reasonably and safely be stored on board, such as damaged equipment or office furniture, shall be retained aboard for shore disposal.

**19-7.3.3. Special Area Discharge Reports.** Under APPS, the Secretary of Defense must report annually in the Federal Register on the amount and nature of discharges in special areas in effect in which the discharge did not meet Annex V limitations. Accordingly, upon completion of operations in special areas in effect, Navy ships shall report the following information to CNO (N45), information copies to the chain of command, regarding all discharges *other than food waste, pulped garbage and shredded and bagged metal and glass*:

- a. Date of discharge
- b. Special area involved
- c. Nature and amount of discharge (estimated pounds of plastic; unshredded metal and glass; unpulped wood, paper and cardboard; ceramic; or other non-food material).

Negative reports are required.

#### **19-7.3.4 Foreign Food and Garbage**

a. Navy ships shall comply with USDA regulations pertaining to ship introduction of foreign source garbage into the U.S., its territories and possessions.

b. If practicable, ships shall totally consume all produce (fruits and vegetables) bought in any foreign port or dispose of it beyond 25 nm from U.S. shores. If not disposed of before entering within 25 nm from shore, ships shall segregate such produce as food wastes and dry materials (packaging, etc.) for special disposal ashore by one of the following USDA-approved methods:

(1) Cooking by steam or other heat source in a leakproof container at 212°F for 30 minutes and disposal of residues by burying (sanitary landfill methods).

(2) Incinerating in an incinerator approved by the EPA.

(3) Grinding and flushing through a ship's CHT system (when installed) to a USDA-approved sewage system ashore.

c. The standards given above do not preclude discharge of any solid waste in an emergency when failure to do so would clearly endanger the health or safety of shipboard personnel.

#### **19-7.4 Training**

a. Ships shall train personnel responsible for handling ship's garbage on the discharge restrictions applicable to the waste before assignment to those duties. Such training shall include the proper collection, treatment and disposal of plastics waste.

b. Ships shall train personnel responsible for the supervision and approval of overboard disposal of solid waste on the legal requirements applicable to this waste category.

c. All personnel assigned to operate and maintain solid waste processing equipment (plastics waste processors, shredders, and pulpers), shall complete the Plastics Processor Computer-Based Training (CBT), A-690-0003, and the Pulper/Shredder CBT, A-690-0004, interactive courseware, as applicable, prior to assignment.

#### **19-8 Medical Waste**

##### **19-8.1 Legislation (This section contains background material from which Navy policy is derived)**

**19-8.1.1 U.S. Public Vessel Medical Waste Anti-Dumping Act.** Prohibits public vessel dumping of medical waste into ocean waters during peacetime, except under emergency conditions.

##### **19-8.2 Terms and Definitions**

**19-8.2.1 Medical Waste.** Medical waste is any waste generated during patient diagnosis, treatment or immunization. Medical waste is of two categories, infectious waste and noninfectious waste.

a. **Infectious Medical Waste.** Infectious medical waste is liquid or solid waste that contains pathogens in sufficient numbers and with sufficient virulence to cause infectious disease in susceptible hosts exposed to the waste. Specific examples of infectious wastes are provided in reference (i).

b. **Non-infectious Medical Waste.** Non-infectious medical waste includes disposable medical supplies and materials that do not fall into the category of infectious medical waste. Specific examples of non-infectious medical wastes are provided in reference (i).

##### **19-8.3 Navy Policy**

a. Ships shall steam sterilize, suitably package and store infectious medical waste for ultimate disposal ashore.

b. Reference (i) governs shipboard labeling, handling and storage of potentially infectious medical waste.

c. After steam sterilizing, ships properly equipped may incinerate infectious paper and cloth-based medical waste.

- d. Ships shall not incinerate plastic and wet materials.
- e. Ships shall collect sharps in plastic autoclavable sharps containers. They shall never recap, clip, cut, bend or otherwise mutilate needles or syringes to avoid causing accidental puncture wounds and infectious aerosols. Ships shall retain all sharps on board for proper disposal ashore. They shall dispose of unused sharps ashore in the same manner as medical waste.
- f. Ships may dispose of liquid wastes by discharging them into the sanitary system.
- g. Ships may dispose of non-infectious waste as garbage, not requiring steam sterilizing or special handling. Ships shall process and dispose of this material in the same method as prescribed for similar material in section 19-7 (e.g., plastics will be sent to the plastics waste processor; paper and cardboard will be pulped; and glass and metal (excluding sharps) will be shredded).
- h. Ships shall establish a system of tracking storage and disposal of infectious medical waste as required by reference (i).
- i. If retention of potentially infectious wastes would threaten the health or safety of personnel on board, create an unacceptable nuisance condition or compromise combat readiness, overboard discharge (excluding sharps) is authorized (using the methods prescribed for similar material in section 19-7) beyond 50 nm provided such waste has been steam sterilized and packaged for negative buoyancy. Ships shall record in the deck log the overboard discharge of infectious medical wastes.
- j. The requirement to steam sterilize before disposal at sea does not apply to submarines.

**19-8.4 Training.** Ships shall train personnel responsible for processing and disposing of shipboard medical waste to ensure that such actions comply with the requirements governing this waste.

## **19-9 Oil and Hazardous Substance Spills**

### **19-9.1 Terms and Definitions**

**19-9.1.1 Facility Response Team (FRT).** Emergency response personnel (formerly known as On-Scene Operations Teams) who are designated, trained and equipped to provide rapid response to OHS releases that occur on or from their facility.

**19-9.1.2 Navy On-Scene Coordinator (NOSC).** The Navy official designated to coordinate contingency planning and direct Navy OHS spill/ release response operations within a preassigned area. Shoreside NOSCs are normally the RECs designated by area environmental coordinators to coordinate environmental and other broad Navy shore activity issues on a regional basis (see chapter 1). Fleet NOSCs are fleet commanders who direct all fleet operations within assigned ocean areas. See chapter 10 for further clarification of NOSC assignment and responsibilities.

**19-9.1.3 Spill.** An accidental or not permitted discharge of OHS into or upon the water. In this chapter, the definition does not apply to spills on board ship that do not go over the side.

**19-9.1.4 Supervisor of Salvage (SUPSALV) Spill Response Team (SSRT).** Specially trained and equipped mobile spill response team maintained by COMNAVSEASYS COM SUPSALV (NAVSEA 00C). COMNAVSEASYS COM maintains the team and an extensive inventory of offshore and large-scale spill response equipment to support NOSC's and commanding officers for offshore, salvage-related, or major inland oil spills and HS releases.

## **19-9.2 Policy**

**19-9.2.1 Designation of Fleet Navy On-Scene Coordinators.** Fleet CINCs shall designate the fleet NOSC's.

**19-9.2.2 Shore-Based Facility Response Teams (FRTs).** FRTs maintain trained personnel and specialized equipment to contain and recover OHS spilled into harbor waters. The primary functions of the FRTs are to respond to port spills and spills that can be readily contained and recovered using local facility equipment.

**19-9.2.3 SUPSALV Spill Response Capability.** SUPSALV maintains an extensive inventory of salvage and large-scale oil spill response equipment to support pre-designated NOSC's in offshore- and salvage-related spill control operations. SUPSALV's salvage inventory includes all equipment needed to remove oil and repair and salvage a stranded or damaged vessel. The spill response inventory includes booms; skimmers; tow vessels; pumps for offloading petroleum, oil, and lubricants (POL); portable storage; and related equipment. These inventories are located in response centers in Williamsburg, VA; Stockton, CA; Pearl Harbor, HI; and Anchorage, AK and are designed for rapid mobilization to spill sites worldwide. Salvage equipment is also maintained in Livorno, Italy; Sasebo, Japan; Bahrain; and Singapore.

Trained operators, mechanics, and supervisory personnel deploy from U.S. response centers with the equipment. SUPSALV, headquartered in Washington, DC also maintains access to a full range of technical experts and advisors as well as specialty equipment from other government agencies, industry and academic institutions.

**19-9.2.4 Ship Spill Response Capability.** For spills over the side, ship's personnel under the commanding officer or master shall initiate immediate actions to mitigate the effects of the spill.

a. Each ship shall maintain a minimum of one Mk II Oil Spill Containment and Cleanup Kit, AEL 2-550024006, for overboard oil and hazardous substance spill response. The Hazardous Material Spill Response Kit, AEL 2-550024007, discussed in reference (d), is available for spills that occur on board the ship. If the response to Navy ship spills/releases is considered beyond the ship's limited capability, the cognizant shore activity commanding officer or fleet NOSC will provide appropriate assistance and direct response efforts.

b. While mitigating the spill, in all cases of spills/releases, the ship's commanding officer or master shall immediately report the incident to the cognizant shore activity commanding officer, the NOSC, and other officials as required by the ship's SCP. The Hazardous Material Control and Management (HMC&M) CD-ROM program lists spill response points of contact.

**19-9.2.5 OH Spill Response Within the U.S. Contiguous Zone.** Ships shall comply with the following OHS spill response procedures when within the U.S. contiguous zone:

- a. In Navy ports, the ship's commanding officer shall:
  - (1) Notify the shoreside NOSC/cognizant facility commanding officer by the most expeditious means possible. For environmentally significant spills, see paragraph 19-9.2.8.
  - (2) Notify the National Response Center (NRC) by telephone at (800) 424-8802.
  - (3) Take, insofar as practical, immediate actions to mitigate the effects of the spill.
  - (4) Follow up by submitting a naval message. Appendices H and I provide formats for OHS spill reports.
- b. In non-Navy ports (and elsewhere within the contiguous zone), the ship's commanding officer shall:
  - (1) Notify the appropriate shoreside NOSC and cognizant shore facility commanding officer specified in the shoreside NOSC contingency plan. For environmentally significant spills, see paragraph 19-9.2.8.
  - (2) Notify the NRC by telephone at (800) 424-8802.
  - (3) Take, insofar as practical, immediate actions to mitigate the effects of the spill. Rapid action by the ship's crew can result in containment and collection of the spill. Shipboard personnel shall use available means to clean up minor spills before requesting assistance from shore-based personnel.
  - (4) Follow up by submitting a naval message. Appendices H and I provide formats for OHS spill reports.
- c. See section 10-5 of this manual for information on NOSC responsibilities and reporting requirements.

**19-9.2.6 OHS Spill Response Outside the U.S. Contiguous Zone as Defined in Governing Contingency Plans.** For OHS spills in these areas, ships shall:

- a. Initiate immediate action to mitigate the effects of the spill.
- b. Notify the predesignated fleet NOSC by naval message using the format in appendix H for oil and appendix I for HS. For information on environmentally significant spills, see paragraph 19-9.2.8.
- c. The fleet NOSC shall implement the applicable fleet NOSC Oil and Hazardous Substance Spill Response Plan.

**19-9.2.7 OHS Spill Response in Waters of Foreign Countries.** Ships shall take the following action for an OHS spill in these waters:

- a. The ship's commanding officer shall initiate immediate action to mitigate the effects of the spill.
- b. The ship's commanding officer shall immediately notify the predesignated fleet NOSC and/or shoreside NOSC (as defined in governing contingency plans) by naval message. Appendices H and I contain formats for OHS spill/release messages.
- c. The fleet and shoreside NOSC shall implement the applicable NOSC Oil and Hazardous Substance Spill Response Plan.

**19-9.2.8 Environmentally Significant Spills.** For spills anywhere resulting from catastrophic events, causing significant adverse public reaction, having geopolitical implications or for other causes warranting OPREP-3 special incident reports per reference (d), ships shall make the initial report by the OPREP-3 system. Following the OPREP-3 report, the cognizant fleet or shoreside NOSC shall forward an amplifying report in the format prescribed in appendix H (for oil) or appendix I (for HS).

**19-9.2.9 Fleet Oil and Hazardous Material Spill Response Plans.** Fleet CINCs, when acting as the NOSC, shall prepare fleet OHS Spill Response Plans for spills that occur outside the U.S. contiguous zone. Such plans shall include spills in foreign waters and ports. COMNAVSEA- SYSCOM (SUPSALV) shall provide assistance to Fleet CINCs in preparing the plans.

**19-9.2.10 Shipboard Spill Contingency Plans (SCPs).** Each Navy and MSC ship shall develop a written Oil/HS SCP. Ships may consolidate the SCP with the HM SCP required by reference (d), but shall address the unique procedures for spills over the side and use of the MK II Oil Containment and Cleanup Kit. The plan(s) shall contain procedures for reporting, containment, control, recovery, and disposal of spilled material, protective clothing, and spill clean-up materials; information sources for oil and HS; and names and telephone numbers of fleet as well as shoreside NOSCs. Although neither Coast Guard nor State officials have authority to require preparation of public vessel OHS SCPs, the Navy will provide Navy ship OHS SCPs to Coast Guard and State officials upon request.

### **19-9.3 Training**

- a. Ships shall conduct and document at least one OHS spill response drill for each duty section annually. These drills shall include deployment of the Mark II Oil Containment and Cleanup Kit or Hazardous Material Spill Response Kit and exercising notification practices, including simulated telephone calls and the drafting of "do not release" messages to higher authority. Ships may take credit for responding to actual spills, when such spills meet drill objectives. Where possible, the ship shall include OHS spill response requirements into other routine shipboard emergency drills. Responsible officers shall incorporate lessons learned during these drills into the ship's SCP. Ships are encouraged to participate in local area OHS spill command post exercises and in NOSC/ U.S. Coast Guard-sponsored triennial "area exercises" designed to test worst case spill response capabilities.
- b. The ship shall train in-port watchstanders and command duty officers on in port OHS spill response procedures, the ship's SPC, and local notification requirements prior to assignment.
- c. One petty officer in each inport fireparty and each repair party shall qualify on Watchstation 304, Oil/Hazardous Material (Substance) Spill Response Scene Leader, in the Hazardous Material/Environmental Protection Programs Afloat PQS, NAVEDTRA 43528-A, within 6 months of

assignment. For submarines, type commanders shall specify requirements for completion of Watchstation 304 of the PQS, so that appropriately qualified individuals are present at the scene of any HM or oil spill.

## **19-10 Ship Ballast Water and Anchor System Sediment Control**

**19-10.1 Ballast Water Guidelines.** The Marine Environmental Protection Committee of the International Maritime Organization (IMO) has developed guidelines for the control of ship ballast water to prevent the introduction of unwanted aquatic organisms and pathogens. The U.S. Coast Guard published these guidelines for adoption as voluntary standards to decrease the possibility of further introduction of cholera and other pathogens into U.S. waters. Since Navy ships operate worldwide, the Navy has chosen to adopt the intent of the Coast Guard standards.

**19-10.2** Pollution potentially infects water in harbors, rivers, inlets, bays, landlocked waters and the open sea within 12 nm of the entrance to these waterways. Fleet surgeons or their representatives may declare other areas polluted. Some species if taken up with ballast water and transferred to a different location or ecosystem could cause damage or be harmful to the ecosystem. These species are more prevalent within 3nm from the shore or within the polluted areas described above.

### **19-10.3 Policy**

a. If it is necessary for a surface ship to load ballast water in an area that is either potentially polluted (as defined in paragraph 19-10.2) or within 3 nm from the shore (e.g., amphibious ships operating in such waters and ballasting to operate landing craft or tankers ballasting to replace offloaded cargo), the ship shall pump the ballast water out when outside 12 nm from shore and twice fill the tank(s) with clean sea water and pump prior to the next entry within 12 nm from shore. Surface ships will effect a ballast exchange twice in clean water, even if ballast water was pumped out before exiting the polluted waters or 3 nm limit, since residual water remaining in a tank after emptying it may still contain unwanted organisms, that could be transferred during the next ballasting evolution.

#### **NOTE:**

Ballast water exchange is not required during local operations or when reentering within 12 nm in the same locale as the ballast water was initially loaded.

b. Surface ships' engineers shall record in the ship's engineering log the loading of ballast water in potentially polluted areas or within 3 nm from land and the flushing of ballast tanks to rid them of possible pollutants or unwanted species. The entry shall include the geographical position and the amount of ballast water taken on.

c. Surface ships with seawater compensated fuel stowage systems shall also record sea-water intake occurring in potentially polluted areas or within 3 nm of shore during routine internal fuel transfer for propulsion plant operation (but need not effect a ballast water exchange).

d. Surface ships shall routinely wash down anchors, chains and appendages with seawater when retrieving them to prevent on board collection of sediment, mud and silt. Where possible following anchor retrieval, surface ships shall also wash down chain lockers outside 12 nm from land to flush out sediment, mud or silt.

e. Amphibious vessels launching and recovering amphibious vehicles shall ensure those vehicles, including their treads, are washed down after completion of operations. Ships shall dispose of wash water before entering within 12 nm of the next operating area.

## **19-11 Protection of Marine Mammals**

### **19-11.1 Legislation (This section contains background material from which Navy policy is derived.)**

**19-11.1.1 Marine Mammal Protection Act.** Protects marine mammals by prohibiting unauthorized "taking" of marine mammals in the U.S. or on the high seas.

### **19-11.2 Terms and Definitions**

**19-11.2.1 Marine Mammal.** Any ocean dwelling mammal, including sea otters, manatees, dugongs, sea cows, seals, walruses, whales, dolphins and porpoises or ones that primarily inhabit the marine environment (such as polar bears).

**19-11.2.2 Taking.** To harass, hunt, capture or kill or attempt to harass, hunt, capture or kill any marine mammal.

### **19-11.3 Navy Policy.**

**19-11.3.1 Marine Mammal Protection.** Marine mammals enjoy protection under the Marine Mammal Protection Act. Therefore, no Navy vessel shall deliberately harass a marine mammal. Commanders and commanding officers shall plan and act to protect marine mammals during operations and planning.

### **19-11.3.2 Whale Strikes**

a. To assess the Navy's compliance with the Marine Mammal Protection and Endangered Species Acts, ships shall report all instances of whale strikes to CNO (N45). Reports are intended to assist the Navy in assessing compliance status only. Ships are not expected to report to outside agencies unless special circumstances apply.

b. For ease of reporting, ship shall use the OPREP/Unit SITREP format text fields of reference (e) without the flagword "Unit SITREP", or if the incident requires an actual OPREP/Unit SITREP report, ships shall submit the report per normal procedures with CNO (N45) included as an information addressee. For an actual OPREP/Unit SITREP, the ship should include the whale strike details in the initial report or subsequent updates as time allows.

c. The following is an example message with general text fields to include:

PRIORITY  
FM: [REPORTING SHIP]  
TO: CNO WASHINGTON DC//N45//  
INFO: [APPROPRIATE CHAIN OF COMMAND]

UNCLAS//N05090//

MSGID/GENADMIN/[REPORTING SHIP]//

SUBJ/WHALE STRIKE REPORT//

RMKS/1. WHALE STRIKE DETAILS

- A. DATE, TIME, AND LOCATION
- B. VESSEL'S COURSE AND SPEED
- C. OPERATIONS BEING CONDUCTED BY THE SHIP
- D. WEATHER CONDITIONS, VISIBILITY AND SEA STATE
- E. DESCRIBE THE WHALE IN AS MUCH DETAIL AS POSSIBLE; E.G., LENGTH, COLOR, OTHER DISTINGUISHING FEATURES
- F. NARRATIVE OF INCIDENT, INCLUDING RELATIVE POSITION AND MOVEMENTS OF SHIP AND WHALE
- G. INDICATE IF PICTURES/VIDEOS WERE TAKEN.

d. Reporting of other direct interactions with whales, such as instances where naval units assist whales entangled in nets, is also encouraged.

## **19-12 Floating Drydocks**

### **19-12.1 Terms and Definitions**

**19-12.1.1 Floating Drydock.** A mobile dock, floating in water, capable of lifting a host ship for repairs to its underwater hull.

**19-12.2 Navy Policy.** Drydocks shall follow these procedures in handling solid waste:

#### **a. Industrial Wastes**

(1) Using vacuum methods, drydocks shall periodically remove and send to shore facilities for disposal: spent sand, metals, wood, liquid wastes, solid wastes and all other industrial waste from the floor of the drydock. Drydocks shall prevent those wastes from entering the air or surrounding waters. Prior to flooding the dock, they shall remove all loose materials and floors and vacuum clean the chainways.

(2) Floating drydocks equipped with industrial waste collection systems shall use the systems to the maximum possible extent for processing waste from hull-blasting or anti-fouling paints. If the drydock discharges the processed water into the sewer system or directly into surface waters, it shall comply with applicable Federal, State and local regulations. Discharges into the surface waters, may require a NPDES permit.

**b. Sewage and Graywater.** Where possible, drydocks and hosted vessels shall transfer all sewage and graywater ashore for proper disposal.

**c. Discharge Permits.** Floating drydocks may be required to obtain Federal or State Clean Water Act discharge permits. See paragraph 19-2.2.8 for details.

## **19-13 Noise**

**19-13.1 Legislation.** The Noise Control Act provides for Federal performance standards, which the Navy must incorporate into the design of new ship systems and equipment to reduce noise emission. Retrofit modifications are not prescribed for existing noise sources. Military aircraft, combat equipment and weapon systems are exempt from new product design standards. Workplace noise is not environmental noise. Reference (d) prescribes workplace noise abatement.

**19-13.2 Navy Policy.** The use of powered tools, machinery, outboard loudspeakers or any other devices that emit excessive noise, either directly or indirectly through re-radiation, shall be restricted to normal daylight working hours to the maximum possible extent.

## **19-14 Responsibilities**

### **19-14.1 COMNAVSEASYSCOM shall**

- a. Develop, procure and install the necessary shipboard sewage systems, solid waste processing equipment, oil pollution abatement equipment and associated support designed to minimize health and safety hazards and to comply with applicable standards.
- b. Develop, procure and install the necessary pollution abatement equipment and associated logistic support to allow Navy floating drydocks to operate in full compliance with guidelines and standards.
- c. Continue the inspection and certification program to ensure that shipboard oil pollution abatement systems and sewage systems are properly installed and fully operational and to ensure adequate technical documentation, spare parts support and crew indoctrination are provided.
- d. Provide engineering and technical assistance to the fleet, as required, to ensure the safe and effective operation of shipboard pollution abatement systems and equipment, the proper management of HM and the meeting of air pollution control requirements.
- e. Provide support and hardware for shipboard environmental training programs established by CNET.
- f. Acquire, distribute and install appropriate disposal and treatment systems, containers, labels, handling equipment, clean-up materials and protective clothing to allow safe and effective control of HM aboard Navy ships. Ships shall use reference (d) as guidance for proper management of HM aboard.
- g. Initiate procurement procedures to ensure the major noise products and equipment, not designed for combat use, meet Federal noise emission standards.
- h. Ensure that all ships have proper material support, including adequate spare parts for installed sewage systems.
- i. Ensure that associated funding requirements are properly identified, budgeted and programmed.
- j. Promote research to define and study noise pollution problems unique to the Navy and coordinate such research with other DOD components and with EPA.

- k. Identify, evaluate and correct Navy ships' systems and equipment that are major sources of environmental noise.
- l. Develop improvements to shipboard processes to reduce the use of HM and the generation of shipboard used HM.
- m. Periodically assess, by means of regularly scheduled pierside surveys, the compliance status of Navy ships regarding applicable air pollution control requirements and report all findings to commanding officers, fleet commanders and other appropriate command levels.
- n. Provide assistance and guidance to fleet and shoreside NOSC's in the preparation of oil spill and HS release response plans.
- o. Provide general shipboard OHS SCPs to Navy ships for use in preparation of ship-specific OHS SCPs.
- p. Develop Shipboard OHS Spill Kits containing appropriate equipment and protective clothing for personnel use in responding to OHS spills.
- q. Provide specialized equipment and trained personnel to assist NOSC's/commanding officers in responding to offshore, salvage-related and major inland oil spill and HS release response operations.
- r. Provide proper reception capabilities at COMNAVSEASYSCOM facilities for receipt of ship-generated oily waste and waste oil, sewage and graywater, solid waste and used HM. This includes transfer hoses, associated fittings and adequate tank holding capacity at each COMNAVSEASYSCOM facility for all visiting ships, Navy and non-Navy.
- s. Ensure that operating forces obtain adequate system documentation with particular emphasis on ensuring that the documentation contains health, sanitation, and safety guidance. Documentation shall include:
  - (1) Equipment technical manuals for all installed equipment/systems
  - (2) Maintenance Requirements Cards (MRCs) covering a comprehensive sewage system preventive maintenance program and certification criteria
  - (3) Sewage Disposal Operation Sequencing System (SDOSS) which consists of systematic and detailed written procedures using charts, instructions and diagrams developed for the operations of a specific ship's sewage system
  - (4) Reference (c), chapter 593
  - (5) PCB Advisories.
- t. Develop contract requirements for ship availabilities in private shipyards to process ship generated waste in compliance with the law.

u. Apply for required HW generator numbers required to manage Navy-generated and co-generated HW at private shipyards. Manage the HW manifest program and provide annual management reports to CNO and the fleets on program cost and effectiveness.

v. Develop and issue to the fleet site-specific HW management procedures for private shipyards. Provide on-site coordination from the SUPSHIP office with the identified ship HM coordinator.

w. Identify to the type commander or type commander representative any unresolved issues of ship noncompliance with SUPSHIP-generated procedures.

**19-14.2 Chief of Naval Education and Training (CNET) shall**

a. Establish formal training programs on the operation, maintenance, sanitation and safety of all shipboard sewage systems. Monitor and update training programs as required.

b. Develop shipboard indoctrination programs on sanitation, safety and basic operation of all sewage systems. Review and revise indoctrination programs as necessary.

c. Establish formal training programs at appropriate facilities on the operation and maintenance of shipboard oil pollution abatement systems and equipment. Monitor and update training programs as required.

d. Provide shipboard indoctrination programs on oil spill control, oil reclamation and the basic operation of all oil pollution abatement systems and equipment. Review and revise indoctrination programs as necessary.

e. Establish formal training programs on the handling, storage, treatment, disposal and cleanup of shipboard oil and HS. Monitor and update training programs as required.

**19-14.3 Commander, Naval Legal Service Command** shall establish training courses on environmental compliance afloat for military lawyers assigned to afloat billets, fleet staffs and shore stations providing support to afloat units.

**19-14.4 Chief, Bureau of Medicine and Surgery (BUMED) shall**

a. Issue guidance for shipboard medical department personnel concerning health and sanitation aspects of shipboard sewage systems.

b. Ensure that training programs for shipboard medical personnel include all aspects of health and sanitation associated with shipboard sewage systems.

- c. Determine, validate and establish health criteria and standards relating to chemical and physical environmental health standards.
- d. Collect, evaluate and disseminate data related to health problems associated with lead and zinc chromate paint removal aboard ship.
- e. Perform research and evaluation in environmental medicine to determine the health impacts of Navy sources of environmental noise.
- f. Provide, at Navy ports, the required services for disposal of medical waste generated by ships and ensure that disposal ashore complies with applicable Federal, State and local laws or regulations and SOFAs or international agreements.

**19-14.5 Fleet CINCs shall**

- a. Ensure that ships under their command are provided with appropriate sewage systems, air emission and oil pollution abatement equipment, solid waste treatment and disposal systems and low-noise emission equipment.
- b. Ensure that ships under their command possess appropriate disposal/treatment systems, containers, labels, handling equipment, clean-up materials, spill kits and protective clothing to allow safe and effective control of shipboard HM.
- c. Provide, at Navy ports under their command, proper facilities for receipt of ship-generated solid waste, sewage and wastewater, HM and oily waste and waste oil. Such facilities will include appropriate discharge hoses, fittings and holding capacity for wastes.
- d. Ensure that ships operate their sewage systems; air, oil and solid waste control systems; and other pollution abatement systems per the requirements of this instruction.
- e. Provide for repair and maintenance of air, oil, sewage and solid waste pollution abatement systems that are beyond the capability of ship's force to accomplish.
- f. Issue operational guidelines and reporting procedures for compliance with the policies set forth in this instruction for ship-generated plastic waste.
- g. Predesignate fleet NOSC's.
- h. Provide the names and addresses of fleet NOSC's to fleet units.
- i. Fund the cleanup of OHS spills from Navy vessels under their command.
- j. Ensure that assigned Navy floating drydocks possess appropriate pollution abatement systems and equipment.
- k. Provide proper reception facilities at cognizant Navy ports for receipt of shipboard- generated industrial waste and sewage.

- l. Ensure that assigned drydocks operate their pollution abatement systems per paragraph 19-12.2.
- m. Provide for repair and maintenance of pollution abatement systems beyond the capability of assigned drydock's force to accomplish.
- n. Establish procedures to ensure, to the maximum extent feasible, that used and excess HM is offloaded at a Navy or other public facility prior to a ship's entering a private shipyard for an availability. Such procedures shall include the offloading of HM not anticipated for use by ship's force during the availability.
- o. Ensure that ships identify a shipboard HM coordinator to the SUPSHIP for each ship availability at a private shipyard. Ensure that this individual has the authority and resources commensurate with the assigned responsibility to ensure shipboard compliance with HM and HW management procedures and site specific management practices established by the SUPSHIP.
- p. Ensure that ships identify, in preavailability planning conferences, the types and amounts of used HM anticipated by ships' force during the availabilities.
- q. Direct ships to comply with all established HM and HW management practices and those site-specific procedures delineated by the SUPSHIP.
- r. Ensure type commanders monitor ship compliance with established HM/HW procedures while in private shipyards.
- s. Consider the protection of marine mammals during operational planning and vessel operations.
- t. Inform ship commanding officers of reference (b) compliance requirements for marine coatings at Navy and commercial affected source sites activities. Promptly request marine coating reporting waivers from regional EPA offices with assistance from RECs, for operational ships arriving at naval activities that are "affected sources" sites

**19-14.6 Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM)** shall implement programs for source reduction of plastics aboard ship by identifying non-plastic packaging products and non-plastic consumables for shipboard use.

**19-14.7 Commander Military Sealift Command (COMSC)** shall

- a. Properly equip assigned ships with appropriate sewage systems, air emission and oil pollution abatement equipment, solid waste treatment/disposal systems and low-noise emission equipment.
- b. Equip assigned ships with appropriate disposal/treatment systems, containers, labels, handling equipment, clean-up materials, spill kits and protective clothing to allow safe and effective control of shipboard HM.
- c. Ensure that assigned ships operate installed sewage systems, air, oil and solid waste control systems and other pollution abatement systems per the requirements of this instruction.

- d. Provide for repair and maintenance of air, oil, sewage and solid waste pollution abatement systems that are beyond the capability of ship's force to accomplish.
- e. Issue operational guidelines and reporting procedures for compliance with the policies set forth in this instruction for ship-generated plastic waste.
- f. Fund the cleanup of OHS spills from assigned Navy and contract ships.
- g. Establish procedures to ensure, to the maximum extent feasible, that used HM is offloaded from assigned ships at a Navy or other public facility before entering a private shipyard for an availability. Such procedures shall include the offloading of HM not anticipated for use by ship's force during the availability.
- h. Identify a shipboard HM coordinator for each assigned ship's availability at a private shipyard. Provide this individual the authority and resources commensurate with the assigned responsibility to ensure shipboard compliance with HW management procedures and site-specific management practices established at the private shipyard.
- i. Ensure that ships identify, in preavailability planning conferences, the types and amounts of HW anticipated by ships' force during the availabilities.
- j. Direct ships to comply with all established HM and HW management practices and those site-specific procedures delineated for the private shipyard.
- k. Monitor ship compliance with established HM/HW procedures while in private shipyards.

**19-14.8 PRESINSURV shall**

- a. Conduct environmental compliance oversight inspection as a part of the regular ship inspection process. These inspections shall include equipment operation, program compliance and training.
- b. Conduct 2-day "intervening" environmental protection assessments as scheduled by ISICs during an IDTC in which a underway material inspection is not conducted. Provide a letter report on results to commanding officer only. Combine data collected with that from final contract trials and underway material inspections for use by type commanders, CNO (N45), NAVSAFECEN, and environmental protection organizations.
- c. Train assigned inspectors on the requirements of this chapter.
- d. Report to the CNO the status of afloat environmental compliance and issues requiring CNO attention as a part of the periodic brief.

**19-14.9 Regional Environmental Coordinators shall**

- a. Coordinate with the cognizant port clearance authority to ensure LOGREQ replies fully apprise arriving ships of local environmental requirements and port practices.

b. Notify the cognizant area environmental coordinator and CNO (N45) in advance when anticipating regulatory concern over arriving ship environmental compliance. Recommend a course of action to resolve the issue.

c. Maintain close liaison with SUPSHIP offices and naval shipyards to ensure proper resolution of environmental issues regarding ships in overhaul.

d. Report to CNO (N00N) and COMNAVSEASYS COM (SEA-08) any regulatory attempt to assert authority over radioactive or non-radioactive discharges from naval nuclear propulsion plants.

e. Upon request, assist both U.S. and foreign Navy ships in resolving environmental issues, including but not limited to inspection of ships, air emissions, water discharges, oil spill planning and response and natural resource damage assessments following oil spills.

f. Provide information on the Federal, State and local environmental regulations that apply to ships in port. Such information shall describe necessary actions by ship commanding officers to comply with the requirements of this instruction and all other Federal, State and local regulations applicable to the port.

**19-14.10 Commanding officers of Navy ships and masters of MSC vessels shall**

a. Obtain certification and recertification for, properly operate, periodically inspect and properly maintain the ship's sewage and oil pollution abatement systems. Carry out ship-to-shore transfers of sewage and graywater in a safe and effective manner.

b. Operate and maintain his or her ship to conform with applicable State and local air pollution emission regulations and HM regulations.

c. Ensure that ships comply with the guidelines, standards and procedures of this instruction.

d. Dispose of no medical materials in a manner that poses a risk or perception of a risk to the public health and welfare or to the marine environment.

e. Complete and document training of shipboard personnel as prescribed in paragraphs 19-2.2.7, 19-3.4, 19-4.3.3, 19-5.5, 19-6.5, 19-7.4, 19-8.4 and 19-9.3.

f. Schedule periodic inspections (at least quarterly) per reference (j) by senior medical department personnel to maintain sanitary and hygienic conditions of MSD systems and operational practices. Sanitation and hygiene inspections should also be made of solid waste processing equipment (when installed and operating).

g. Post appropriate health and sanitation precautions as required by reference (d); General Specifications for Ships of the United States Navy (GENSPECS); reference (c), chapter 593; and reference (j).

h. Report, as required and established by the chain of command, sewage discharge within 0-3 nm from U.S. shores.

- i. Report to the fleet commander any conditions or system/equipment malfunctions that could result in unlawful air pollutant emissions.
- j. Report to the fleet commander any conditions or system/equipment malfunctions that would necessitate oily waste, HM or solid waste discharge into waters in which discharge is restricted.
- k. Ensure that the engineering log or equivalent oil record book records any oily waste discharge that causes a sheen. When a sheen-producing discharge occurs, determine the cause. Record keeping shall consist of the date, time of occurrence, ship location at the beginning and end of the incident, substance discharged, quantity discharged and the cause of the discharge.
- l. Designate an officer as HM coordinator to ensure that all shipboard personnel comply with reference (d) requirements for HM handling, packaging, storing, labeling, treating and disposal. Prior to the ship leaving port, the HM coordinator shall reconcile all HM left on the pier.
- m. Predesignate one or more shipboard action officers to be responsible for shipboard spill/ release contingencies planning and response.
- n. Prepare shipboard OHS SCPs and coordinate with the cognizant NOSC plan. Provide these plans to Coast Guard and State officials for information, upon request.
- o. Properly train shipboard personnel and make them fully aware of applicable OHS SCPs. Conduct required OHS spill drills.
- p. Report OHS spills as prescribed in paragraph 19-9.2.5 through 19-9.2.8.
- q. Take immediate actions to contain, control and mitigate all spills caused by the ship.
- r. Appoint an officer or petty officer to oversee drydock operations to ensure that industrial waste and sewage collection and treatment systems are properly operated and maintained and that ship-to-shore transfers of the waste are handled in a safe and effective manner.
- s. Offload used and excess HM, to the maximum extent feasible, to a Navy or other public facility prior to entering a private shipyard for an availability. Also offload HM not anticipated for use by ship's force during the availability before entering the private shipyard.
- t. Identify to the SUPSHIP responsible for a private shipyard the ship's HM coordinator for the availability. Provide that individual the authority and resources to ensure shipboard compliance with HW management procedures and site-specific management practices established by the SUPSHIP.
- u. Identify to the SUPSHIP, in preavailability planning conferences, the types and amounts of used HW anticipated by ship's force during the availability.
- v. Comply with all established HM and HW management practices and those site-specific procedures delineated by the SUPSHIP.
- w. During paint removal operations, to the maximum extent feasible, collect the debris, dust and residual materials from the paint removal operation and properly package them for disposal ashore.

x. Report to the chain of command, cognizant REC, area environmental coordinator and CNO (N45) any regulatory request that the Navy apply for permits involving ship discharges or implement measures regarding ship discharges beyond the requirements contained in this chapter. Enter into no agreements with environmental agencies regarding ship discharges without CNO (N45) approval.

y. If it is necessary to load ballast water in a potentially polluted area or within 3 nm from land (i.e., amphibious ships operating in such waters and ballasting to operate landing craft or tankers ballasting to replace offloaded cargo), offload the water outside 12 nm from shore and take on clean sea water and discharge it twice prior to entry within 12 nm from shore. This action need not be taken during local operations in which the ballast water may be discharged into essentially the same waters. Record in the ship's engineering log the loading of ballast water in potentially polluted areas or within 3 nm from shore and the flushing of ballast tanks to rid them of possible pollutants or unwanted species. The entry should include the geographical position and the amount of ballast water taken on.

z. Properly enter reports of all plastic discharges in the deck log. Personally approve any plastic discharges.

aa. Avoid deliberately harassing marine mammals. Consider marine mammal protection during ship operations and planning.

bb. Ensure that the requirements of references (d) and (h) are followed for all activities associated with PCBs, PCB-containing materials or systems potentially contaminated with PCBs (e.g., ventilation systems that employ PCB-containing felt gaskets).

cc. Assign a crewmember as the AEPC. Train the AEPC per paragraph 19-2.2.7c.

dd. Maintain records of ships' force marine coating use for coatings distributed from ships' stores for domestic Navy and commercial affected source sites, as appropriate. Deliver a monthly report of daily coating use by the seventh day of the month following use or before departure, if departing before the end of the month or after a short visit (i.e. several days). Deliver the report to the affected source site Navy shore activity or, when located at a commercial affected source site, to the appropriate SUPSHIP office.

ee. Use only marine coatings that meet VOC content standards of reference (c), chapter 631, table 3-7. These coatings are compliant with reference (b). When approved marine coatings are not available or there is uncertainty whether a material is regulated under reference (b), contact COMNAVSEASYS COM (SEA03M) for information on compliant substitutes. Remove non-compliant coatings from shipboard stores and return them to the supply system as excess HM as soon as possible.

ff. Prohibit the thinning of marine coatings with materials such as coating thinners, solvents, and varnishes. Label paint lockers with a placard stating, "Thinning of marine coatings/paints is prohibited."

gg. Implement the following marine coating work practices: (1) minimize spills of marine coatings, (2) use intact and leak-free marine coating containers and (3) close marine coating containers when not in use.

#### **19-14.11 Commanding officers of floating drydocks shall**

- a. Appoint an officer or petty officer to ensure that drydock personnel properly operate and maintain oil and oily waste collection and treatment systems and that they safely and effectively handle ship-to-shore transfers of the waste.
- b. Properly train drydock personnel working with oil pollution systems, send them to appropriate schools, and fully document this training.
- c. Coordinate with the shore activity commanding officer to ensure compliance with State or local regulatory requirements.
- d. Report to the fleet commander any conditions or system/equipment malfunctions that would necessitate solid waste discharge upon or into restricted waters.
- e. Properly operate drydock systems for the collection and transfer of sewage and wastewater from the ship in drydock to shoreside receiving facilities. Periodically inspect and properly maintain the systems. Handle transfers of sewage and wastewater in a safe and effective manner. Reference (c), chapter 593; GENSPECS, section 593; and reference (e) provide guidance concerning CHT systems.
- f. Ensure discharges from floating drydocks are permitted as required.

**19-14.12 Fleet NOSCs shall**

- a. Develop fleet SCPs.
- b. Provide coordination and direction for the cleanup of OHS spills from Navy ships outside the U.S. contiguous zone.
- c. Provide coordination and assistance, as requested, to predesignated shoreside NOSC assigned in chapter 10.