CHAPTER 3

POLLUTION PREVENTION

3-1 Scope

A) a. The Navy P2 vision is to "Support operational readiness by achieving cost effective, full and sustained compliance and enhanced personnel safety through innovative, aggressive use of pollution prevention." The P2 program is focused on meeting the requirements mandated in Executive Order (E.O.) 12856, reference (a), and E.O. 13101, reference (b), and supporting full and sustained compliance with environmental requirements at the lowest feasible life cycle cost (LCC).

R) b. This chapter provides P2 policies and procedures applicable to all Navy shore facility operations, unless otherwise specified.

R) E.O. 12856 of 3 August 1993, which mandates Federal facility compliance with the Pollution Prevention Act of 1990 and the Emergency Planning and Community Right-to-Know Act (EPCRA), applies only to Federal facilities within the customs territory of the United States. As a matter of voluntary compliance, the Navy will fully comply with E.O. 12856 and all related Navy and Department of Defense (DOD) policy on Guam.

(Note: At the time of this update, E.O. 12856 was under revision, including new and expanded requirements, new goals for reduction of HAZMAT use and toxic releases. The Chief of Naval Operations (CNO) will forward any required changes in OPNAV policy via letter and incorporate them into the next update of this instruction.)

R) c. Related information. Chapter 4 discusses procedures for implementing the Emergency Planning and Community Right-to-Know Act (EPCRA). Chapter 19 discusses P2 for ships. Chapter 2 discusses P2 in National Environmental Policy Act (NEPA) actions. Chapter 14 discusses the Navy Qualified Recycling Program (QRP), solid waste pollution prevention, solid waste reduction, and affirmative procurement for shore activities.

3-1.1 References. References are:

a. E.O. 12856 (A

b. E.O. 13101 (A

c. 40 CFR 355, Regulations for Emergency Planning and Notification Under CERCLA;

d. 49 CFR 173, Shippers - General Requirements for Shipments and Packaging;

e. 29 CFR 1910.1200, OSHA Hazard Communication Standard;

f. 40 CFR 261, Identification and Listing of Hazardous Waste;

g. 40 CFR 302, EPA Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under CERCLA;

h. 40 CFR 372, Toxic Chemical Release Reporting, Regulations;

i. DOD Instruction 4715.4 of 1 July 1998, Pollution Prevention (NOTAL);

3-2 Legislation

3-2.1 Pollution Prevention Act of 1990. This Act establishes the national policy that: Pollution should be prevented or reduced at the

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source whenever feasible. Pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible. Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner, whenever feasible. Disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

3-2.2 Resource Conservation and Recovery Act (RCRA). RCRA requires cradle-to-grave management of hazardous waste (HW). The Act also encourages beneficial reuse of solid waste through recycling and reuse as an energy source. The 1984 RCRA amendments require HW generators and treatment, storage, and disposal (TSD) facility owners to certify that the generator has a program in place to "reduce the volume or quantity and toxicity" of waste and that the TSD method minimizes the threat to health and the environment. In addition, the Act requires generators to report the changes in volume and toxicity of waste actually achieved during the year of the report (in comparison with previous years).

3-3 Terms and Definitions

3-3.1 Affirmative Procurement Program (APP). A program assuring Guideline items composed of recovered materials will be purchased to the maximum extent practicable, consistent with Federal law and procurement regulations.

3-3.2 Authorized Use List (AUL). The list of all hazardous material (HM) needed to support the requirements of a command or facility.

3-3.3 Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP). CHRIMP is a successful methodology to achieve life cycle hazardous material control and management (HMC&M) and P2 at the command and facility levels. The Navy CHRIMP manual provides a standardized approach and guidance for the development and implementation of centralized HMC&M practices that result in a reduction of HM procured, stocked, distributed, and eventually disposed of as waste.

3-3.4 Environmentally Preferable. Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

3-3.5 Extremely Hazardous Substance (EHS). Any substance listed in appendices A and B of reference (c).

3-3.6 Hazardous Inventory Control System (HICS). An automated product tracking and inventory system designed to facilitate the CHRIMP process on board Navy ships.

3-3.7 Hazardous Material (HM). In general, HM is 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. This definition includes all extremely hazardous substances, hazardous chemicals, hazardous substances, and toxic chemicals. HM is any material *regulated as HM*, per reference (d), or any material that requires a material safety data sheet (MSDS), per reference (e). HM is also any material having components which meet or have potential to meet the definition of HW per reference (f), subparts A, B, C, and D, during any phase of its existence: end use, treatment, handling, packaging, storage, transportation, or disposal.

Designation of a material as HM does not eliminate the need for adherence to hazard-specific guidance, which for control purposes, takes precedence over this instruction when a

material is separately regulated or controlled by other instructions or directives. Such materials include ammunition, weapons, explosives and explosive-actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical materials, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos and mercury. These materials are HM to the extent that personnel exposure may occur during manufacture, storage, use, and demilitarization of these items.

3-3.8 Hazardous Substance (HS). Any substance listed in table 302.4 of reference (g).

3-3.9 Hazardous Substance Management System (HSMS). HSMS is an automated chemical tracking system providing "cradle-to-grave" tracking not only of the hazardous material used at a facility, but also the chemical constituents of those materials. The system facilitates Emergency Planning and Community Right-to-Know Act (EPCRA) reporting to comply with E.O. 12856. The system also provides naval activities with a tool to analyze the flow of hazardous material while developing sound P2 management techniques that (1) reduce the amount of hazardous material procured and used and (2) reduce the amount that becomes waste.

3-3.10 Hazardous Waste. A solid waste, or combination of solid wastes, that because of 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.

b. Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

3-3.11 Pollution/Pollutants. Gaseous, liquid or solid by-products of industrial, agricultural or even natural processes, which after recycling, treatment, or other mitigating processes, still produce undesirable environmental effects.

3-3.12 Pollution Prevention. Source reduction and other practices that reduce or eliminate the creation of pollutants through:

a. Increased efficiency in the use of raw materials, energy, water, or other resources.

b. Protection of natural resources by conservation.

c. Reduction/elimination of the use of dangerous, toxic and hazardous materials.

d. Recycling/reuse of materials (A

Examples of P2 techniques include: (R

a. Material substitution

b. Product reformulation

c. Process change

d. Process modification

e. Process Elimination

f. Improved operation and maintenance

g. Integrated recycling.

h. Material Management

3-3.13 Pollution Prevention Equipment Program (PPEP). A program to procure and provide commercially available P2 equipment for Navy activities and to procure, demonstrate, and evaluate new technologies for Navy-wide application. (R

3-3.14 Recycled Material. Previously used materials, substitutable for a raw or source material in the manufacturing process. If not so used, this material would become waste.

3-3.15 Recycling. Using, reusing, or reclaiming materials, including processes that regenerate a material or recover a usable product from it.

3-3.16 Source Reduction. Any practice which:

a. Reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal.

b. Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

3-3.17 Toxic Chemical. Any substance listed in reference (h).

3-3.18 Toxic Chemical Use Reduction. P2 actions to reduce, avoid, or eliminate the use of toxic chemicals.

3-3.19 Toxic Chemical Use Substitution. P2 actions to substitute non-toxic or less toxic chemicals in maintenance/operations/industrial processes.

3-3.20 Used/Excess HM. HM for which there is no further, immediate use aboard the ship or at the shore facility possessing the material. Another ship, shore facility or commercial industry may ultimately use such material for purposes other than those for which it was initially manufactured.

3-3.21 Waste. See "Pollution/Pollutants."

3-3.22 Waste Minimization. Source reduction and the following types of recycling:

a. Beneficial use/reuse

b. Reclamation.

Waste minimization does not include disposal or burning for energy recovery.

3-3.23 Waste Reduction. See "Waste Minimization."

3-4 Requirements

3-4.1 Navy P2 Level 1 Program Drivers (R

The Navy defines as "Level 1," those environmental requirements derived from Federal, State, or local environmental laws, regulations, or E.O.s. Level 1 program drivers for the Navy P2 program include:

a. E.O. 12856 requires Federal agencies to comply fully with the requirements of the P2 Act (PPA) of 1990 and the Emergency Planning and Community Right-to-Know Act (EPCRA). It requires Federal agencies to adopt voluntary goals for reduction of toxic releases, be proactive about source reduction, report under the Toxic Release Inventory (TRI) program, develop written facility P2 Plans, review/revise standardized documents, integrate P2 in acquisition and procurement efforts, and make life cycle cost decisions which include environmental considerations.

b. E.O. 13101, reference (b), requires Federal agencies to prevent pollution whenever feasible, incorporate waste prevention and recycling into daily operations, increase procurement of environmentally preferable items, expand existing

affirmative procurement and recycling programs, establish model facility demonstration projects, integrate P2 and affirmative procurement into acquisition programs, and establish goals for reduction of solid waste generation and increased procurement of environmental preferable items. Chapter 14 contains policy and guidance related to solid waste reduction, recycling and affirmative procurement.

c. The Resource Conservation and Recovery Act (RCRA) requires that facilities which dispose of hazardous wastes have programs in place to minimize the generation of such hazardous waste.

A) d. Other environmental statutes including the Clean Air Act and Clean Water Act include specific requirements for P2.

3-4.2 DOD Pollution Prevention Policy. Reference (i) establishes policy, assigns responsibilities, and prescribes procedures for P2.

This document requires DOD to reduce use of hazardous material (HM), generation or release of pollutants, and any adverse effects on human health and the environment. It requires selection, use and management of HM over its life cycle so that DOD incurs the lowest cost required to protect human health and the environment. DOD policy emphasizes P2 and the Pollution Prevention Act environmental management hierarchy (3-2.1) when developing solutions. DOD policy emphasizes avoiding or reducing the use of HM as the preferred method of P2. Where an activity cannot avoid the use of a HM, the directive requires the activity to follow regulations regarding use and employment of HM management practices that avoid harm to human health and the environment. This document requires emphasis on using less HM in processes and products instead of end-of-pipe management of HW. For related information, chapter 4 contains DOD policy on EPCRA and chapter 14 provides DOD policy on solid waste reduction, recycling and affirmative procurement.

3.5 Navy P2 Program Description (A

The Navy's approach to P2 is to Assess, Implement, Manage and Measure (AIMM). The Navy P2 program assesses P2 opportunities through the P2 planning process, using such tools as Model P2 Plans, P2 Planning Standard Operating Procedures, the P2 Opportunities Handbook, the Tri-Service P2 Technical Library, Navy Environmental Leadership Program (NELP), Fleet Assistance Support and Technology Transfer Team (FASTT), P2 Afloat Program, and P2 Technology Demonstrations. After careful evaluation, the Navy implements P2 opportunities through the annual Baseline Assessment process, the Navy Working Capital Fund process and the centrally managed P2 Equipment Program (PPEP). The Navy manages unavoidable and irreducible materials and waste streams through programs including the CHRIMP, the Hazardous Substances Management System (HSMS), the Navy Qualified Recycling Program (QRP), as well as regulatory permitting programs. The Navy measures progress through reporting under the Emergency Planning and Community Right to Know Act (EPCRA) and the DOD Measures of Merit.

The Navy strives for Environmental Excellence using the AIMM P2 methodology as a primary tool. Navy Environmental Excellence requires two important components, Sustained Compliance and Operational Readiness. An excellent Navy environmental quality program must both support the operational readiness of the Navy to perform its national security mission and must also achieve and maintain sustained compliance. The Navy cannot maintain readiness without compliance, and compliance without readiness is not excellence for the United States Navy. Sustained Compliance plus Operational Readiness equals Environmental Excellence, (SCORE).

The overall Navy P2 concept is to "AIMM to SCORE" to achieve environmental excellent through utilization of P2 as a tool to support sustained compliance at the lowest life cycle cost.

The Navy Environmental Quality Initiative (EQI) is an essential element in the AIMM to SCORE concept. This comprehensive initiative focuses on maximum P2 to achieve and maintain compliance. The EQI has four primary objectives:

1. Reduce the life cycle cost of the Navy's environmental quality program.

2. Achieve sustained environmental compliance at Navy activities.

3. Reduce generation of pollutants at Navy activities.

4. Increase use of P2 alternatives to meet environmental compliance requirements.

In addition to supporting the requirements of E.O.s 12856 and 13101, Navy's EQI focuses on using current P2 tools to support statutory and regulatory compliance. The EQI supports a transition from P2 planning to more comprehensive environmental quality planning, focused on lowest life cycle cost and sustainable compliance. The Navy P2 program is designed to allow Navy activities to make the best possible use of the significant assets already available such as their activity P2 plans, the PPEP, and the P2 Technical Library. Integrated environmental quality planning supports operational readiness by targeting source reduction efforts and in turn reducing regulatory and cost impacts on Navy operations.

3.6 Navy P2 Policy

The Navy shall act to prevent pollution and to decrease the release of pollutants into the environment using the methods identified in the EPA P2 hierarchy shown below:

a. Source Reduction

b. Recycling

c. Treatment

d. Disposal.

In establishing this hierarchy, the EPA stated the criteria for selecting the method depend upon the requirements of the applicable law, the level of achievable risk reduction, and the cost-effectiveness of the option. Under Navy policy, source reduction is always the most desirable option as it addresses reducing both the volume and toxicity of pollution.

The Navy shall take all necessary actions to comply with the requirements of E.O. 12856 and E.O. 13101, comply with other P2 requirements derived from applicable Federal, State and local laws and regulations, and use P2 to support full and sustained environmental compliance at Navy activities at the lowest feasible life cycle cost (LCC).

3-6.1 Pollution Reduction. All Navy facilities shall identify and implement source reduction opportunities to reduce releases of toxic chemicals to the environment, off-site transfer of such toxic chemicals for treatment and disposal, and generation and disposal of hazardous and non-hazardous solid wastes. Further, Navy facilities shall act to increase on- and off-site recycling of hazardous wastes, increase diversion of non-hazardous solid wastes for recycling or composting and increase procurement of environmentally preferable products and services.

3-6.2 Hazardous Material Control. Navy commands shall reduce the amount of HM used, and HW generated through up front HM control in procurement, supply, and use by:

a. Developing local mechanisms at shore facilities to identify materials in use that are hazardous and limiting quantities of HM procured and stored. Facilities shall establish HM AULs to control the quantity of HM procured and stored.

b. Implementing CHRIMP to reduce the amount of procured, stocked, and distributed HM eventually disposed of as waste.

c. Establishing methods for substituting a less HM or non-HM for HM where possible.

d. Developing and incorporating new technology or materials that have a reduced impact upon the environment, are safer and healthier, or result in reduced emissions.

e. Modifying HM shelf life to reduce the generation of waste because of shelf life expiration, when possible.

f. Modifying units of issue to reduce the generation of waste because of unused surplus material.

g. Review of local documentation that directs the use of HM to determine possible changes to minimize further the use of HM and generation of HW.

h. Requesting cognizant engineering authorities to modify weapon system maintenance requirement cards and technical manual requirements to reduce or eliminate the use of HM.

i Using the P2 Equipment Program (PPEP).

j. Reviewing standardized documents, including specifications and standards, to identify opportunities to stop or reduce use of extremely hazardous substances and toxic chemicals, consistent with the safety and reliability requirements of its mission.

k. Integrating environment, safety and health (ESH) considerations into all acquisition and procurement actions.

3-6.3 Pollution Prevention Plans. Every Navy facility shall develop and implement a Pollution Prevention Plan. In it, facilities shall address the actions required to reduce pollution from all sources and to all media, and to support full and sustained compliance with environmental requirements at the lowest life cycle cost. (Note: Guidance on development of activity P2 plans is provided in the OPNAV P45 120 10 94 of October 1994)

Facilities should use their P2 Plans as a primary tool for identifying methods and means to achieve compliance with Federal, State and local environmental laws and regulations and E.O.s, enhance personnel safety, and reduce the generation and release of pollutants.

Facilities should use their P2 plans in developing and justifying funding requirements for compliance with applicable regulations and to meet applicable requirements for reducing pollution.

a. Purpose

(1) Identify activities and processes that generate pollutants, including hazardous and non-hazardous solid wastes and toxic releases to all media

(2) Develop technically and economically feasible options to reduce generation of pollutants consistent with the DOD measures of merit and associated goals

(3) Identify methods and mechanisms to use P2 as a tool to achieve full and sustained compliance with DOD and DON instructions and directives and Federal, State and local laws and regulations at the lowest feasible life cycle cost.

b. Applicability and Scope

(1) All Navy activities are required to have a P2 plan (see section 3-4.1b). Host activities shall incorporate tenant activity P2 plans within their P2 plan or oversee the independent development of a plan by the tenant command. The result must support facility-wide P2 and environmental quality planning. The commanding officer, at his or her discretion, may develop separate P2 plans for geographically non-contiguous sites.

(2) To the extent feasible, the activity P2 plan should incorporate within it related plans such as the HMC&M plan, hazardous waste minimization (HAZMIN) plan, storm water pollution prevention plan, solid waste management plan, and ozone depleting substances phase-out plan.

c. Key Plan Elements

(1) Identification of all actions and processes which generate pollutants, including hazardous and non-hazardous solid wastes and toxic releases to all media.

(2) Identification of pollutants generated by the activity, including hazardous and non-hazardous solid wastes and toxic releases to all media.

(3) Identification of compliance vulnerabilities and potential impacts on DOD measure of merit goals associated with generation of pollutants.

(4) Identification of environmental and other quantifiable costs associated with the generation of pollutants.

(5) Identification of potential alternative actions, materials, and processes, including elimination of unnecessary requirements, which will support cost effective compliance and/or support achievement of DOD measure of merit goals.

(6) Identification of priorities for implementing administrative, managerial and process improvements required to meet P2 plan goals

(7) Identification of any barriers to accomplishing P2 plan improvements, including funding, approval process, and document changes.

(8) Documentation of required administrative elements including:

(a) Methods and schedule for updating P2 plan.

(b) Methods for measuring and reporting progress.

(c) Plans to provide P2 training and techniques to establish activity-wide P2 awareness.

(d) HM management and control practices and procedures.

(e) Non-hazardous solid waste recycling and composting practices and procedures.

(f). Commanding Officer Approval and Certification

d. P2 Plan Updates:

As the guiding document for an activity P2 program, activities shall update the P2 plan on a regular basis. This update should support activity efforts to broaden the focus of the plan to integrate sustained compliance through P2, primarily source reduction.

Activities are required to review P2 plans on at least an annual basis. This review should iden-

tify any significant changes in activity mission, function and personnel; progress on actions identified in the P2 Plan; changes to compliance requirements; and changes in activity priorities. This review should be accomplished by base personnel if feasible and can be documented informally by marking up the existing P2 plan or simply adding a short update section.

Activities are required to revise their P2 Plan at least every three years. Pollution Prevention Plan revisions should focus on identification of opportunities to use P2 to meet compliance requirements and to lower overall environmental quality program life cycle costs. The revisions should include revalidation and documentation of the key plan elements identified in section 3.6.3c above. Activities shall provide a copy of the revised plan to the Naval Facilities Engineering Service Center.

e. Public Availability:

Installations should make pollution prevention plans readily available to the public. The means of providing this public access may vary widely from installation to installation, but availability only through FOIA requests is not desirable.

3-6.4 Training. One of the most effective P2 techniques is to train personnel properly on those job functions that have an environmental impact. chapter 24 provides overall environmental training requirements. Individual chapters of this manual discuss the training necessary to achieve compliance with environmental laws and regulations.

3-6.5 P2 Committee:

P2 is a multi-disciplinary effort that requires participation from many functional areas of Navy organizations to be successful. While organization environmental personnel can and should take the lead to implement P2 opportunities, successful implementation requires the participation and support of functional areas including supply, safety, systems maintenance, public works, and operational elements.

Navy organizations should establish a P2 Committee to advise the commander or commanding officer on P2. The primary responsibility of the committee should be the establishment of an integrated organizational P2 program and the development and implementation of policies and procedures required to comply with the requirement of this instruction. The P2 committee should be multi-disciplinary and bring together the various organizations and groups having functional responsibilities and authority over HM acquisition and use, etc. The commander or commanding officer should designate the chairperson of the committee and delegate him or her sufficient authority to ensure that the committee receives required participation and cooperation.

3-7 Responsibilities

3-7.1 CNO (N45) shall: (R

a. Develop and implement Navy P2 policy.

b. Identify Navy opportunities for P2 and facilitate transfer of P2 information and technology.

c. Provide guidance to major claimants and facilities to implement the Navy Pollution Prevention Program.

d. Act as the resource and assessment sponsor for all programs required to implement the requirements of the Navy P2 program including implementation of P2 efforts at Navy facilities .

e. Coordinate with Navy Program Sponsors and acquisition program managers to ensure that Navy acquisition efforts are fully compliant with environmental laws and policies

through all phases of the acquisition process including R&D, design, manufacturing, and ultimate disposal.

f. Actively participate with industry and other Services through joint initiatives to eliminate or reduce shared HM procurement, use, and requirements.

3-7.2 Commander Naval Supply Systems Command (COMNAVSUPSYSCOM) shall:

a. Assist CNO (N45) in managing the HM aspects of the Navy P2 effort and serve as the overall manager for the supply aspects of the Pollution Prevention Program.

b. Develop, implement, and maintain a Navy-wide system for acquiring only authorized HM, integrating command and shore facility HM AULs.

c. When requested, assist system command program managers by providing life cycle costs for HM being considered for acquired systems.

R) d. Develop and recommend to CNO(N45) HM shelf life policies and procedures to support the goal of eliminating disposal of unused HM as hazardous waste. Provide guidance to facility level supply functions in establishing and managing local shelf life control and management programs.

e. Provide guidance to and coordinate efforts of the Navy-wide HM substitution efforts.

R) f. Develop and recommended to CNO (N45) policies and procedures to reduce or minimize the entry of new HM into the supply system.

g. Provide Navy guidance for shore facilities and ships on implementing CHRIMP.

h. Develop and maintain Navy-wide HM/HW tracking systems (HSMS for shore activities and HICS for ships) in support of CHRIMP and to implement E.O. 12856.

i. Provide initial assistance and computer equipment to implement CHRIMP and HICS on ships to the point the ship has acquired sufficient control over a portion of their HM/HW in an operational HICS environment to sustain the operation of HICS on their ship.

j. Provide initial assistance and computer equipment to implement CHRIMP and HSMS at shore facilities to the point a facility has acquired sufficient control over a portion of their HM/HW in an operational HSMS environment to sustain the operation of HSMS at their facility.

k. Develop and implement a Regional Hazardous Material Management System (RHMMS) to ensure that Fleet and Industrial Supply Centers (FISCs) do not declare usable excess HM as excess or waste and, instead, make it available to other FISCs or activities requiring it. The aim is to reduce both waste disposal costs and additional procurement costs.

l. Support CNO(N45) in HSMS software development efforts. (R

(D

3-7.3 Commander Naval Facilities Engineering Command (COMNAVFACENGCOM) shall:

a. Support P2 initiatives as tasked by CNO (N45).

b. Assist CNO (N45) in managing P2 technology transfer efforts.

c. Serve as financial manager in support of the Pollution Prevention Equipment Procurement Program.

d. Provide technical assistance to shore facilities to implement P2 practices and incorporate P2 technology into facility processes.

e. Develop plans for implementing the use of alternative fuel vehicles in Navy vehicle fleets.

R) f. Assist COMNAVSUPSYSCOM in supporting activities in implementation and utilization of the CHRIMP program and the HSMS software system.

g. Designate the Naval Facilities Engineering Service Center (NFESC) as the central repository for all Navy Installation P2 Plans. NFESC shall collect and maintain an up to date copy of each installation's P2 plan.

A) h. In support of Navy's Environmental Quality Initiative, review all Navy P2 plans, develop and distribute lessons learned to support P2 plan updates, identify and transfer Navy-wide P2 for compliance opportunities, and support identification of P2 solutions to meet compliance requirements.

A) i. Assist CNO (N45) in development of process maps and metrics to identify and evaluate business process improvements.

3-7.4 Regional Environmental Coordinators (RECs) shall:

a. Assist CNO (N45) and COMNAVSUPSYSCOM in planning and preparation for CHRIMP and HSMS implementation.

b. Coordinate implementation efforts within their regions and serve as a point of contact for activities in managing and prioritizing implementation.

c. Serve as regional point of contact and coordinator for regional-scale P2 initiatives.

3-7.5 Major claimants shall:

a. Ensure that activities under their cognizance develop, review, revise, and implement Pollution Prevention Plans per the guidance of this chapter.

b. Ensure that activities under their cognizance provide a copy of their Installation P2 Plan, and all subsequent revisions to NFESC.

c. Plan, program, budget, and allocate funds for all facility P2 projects identified in facility Pollution Prevention Plans which support cost effective environmental compliance, support achievement of the DOD measure of merit goals, reduce generation of pollutants, or reduce the overall life cycle cost of the activities environmental program. (R

d. Plan, program, budget, and allocate funds for implementing CHRIMP and HSMS/HICS at shore activities and on ships.

e. Assist COMNAVSUPSYSCOM in implementing CHRIMP/HICS on ships and CHRIMP/HSMS at shore facilities.

f. Develop and implement HM elimination or substitution processes for all systems and operations under their cognizance. These processes shall include the identification, evaluation, and use of the least hazardous material available.

g. Develop processes to ensure that the facility AUL incorporates the least hazardous, technically acceptable materials.

h. Take necessary actions to support Navy achievement of goals established by DOD under E.O.s 12856, 13101 and any subsequent P2 E.O.s.

i. Work with acquisition program managers to aggressively pursue reduction of (R use in all systems.

j. Incorporate Environment, Safety and Occupational Health (ESOH) into the system engineering process using system safety engineering principles and practices.

k. Assess ESOH effects of chemicals, processes and materials posing a high hazard potential. Use the results in all life cycle cost and trade-off decisions.

l. Review and revise standardized documents under their cognizance, including specifications, standards, technical manuals and handbooks to reduce/eliminate requirements for hazardous material/toxic substances and other pollution sources. Reviews shall occur with sufficient frequency to take advantage of P2 opportunities created by changes to management practices, technologies, materials, processes and requirements, as appropriate. Plan, program and budget for these P2 reviews and revisions.

m. Submit P2 Program Metric data annually to CNO(N45) via the P2 Annual Data Summary (P2ADS).

R) **3-7.6 The Chief of Naval Education and Training (CNET)** shall incorporate P2 practices into Navy training, including incorporation of information on source reduction initiatives in appropriate training courses.

3-7.7 Commanders and commanding officers of shore facilities shall:

a. Develop and implement a facility Pollution Prevention Program to support implementation of Navy P2 Policy as specified in this instruction.

b. Develop and implement an activity Pollution Prevention Plan per paragraph 3-6.3. Use the pollution prevention plan as a primary tool for identifying the methods and means to reduce HM use, HW generation and toxic chemical releases, and to support cost effective, full and sustained compliance.

c. Plan, program, budget, and allocate funds for all facility P2 projects identified in facility Pollution Prevention Plans that support cost effective environmental compliance, support achievement of the DOD measure of merit goals, reduce generation of pollutants, or reduce the overall life cycle cost of the activities environmental program.

d. Update the Pollution Prevention Plan on a regular basis. P2 plan updates shall incorporate efforts to use P2 to achieve sustained compliance at the lowest life cycle cost. P2 plan updates should utilize integrated environmental quality planning to support operational readiness by targeting source reduction efforts and in turn reducing regulatory and cost impacts on Navy operations.

Review P2 Plans on at least an annual basis. This review should identify any significant changes in activity mission, function and personnel; progress on actions identified in the P2 Plan; changes to compliance requirements; and changes in activity priorities. Base personnel should accomplish this review, if feasible, and document it informally by marking up the existing Pollution Prevention Plan or simply adding a short update section.

Revise their Pollution Prevention Plan at least every three years. Pollution Prevention Plan revisions should focus on identification of opportunities to use P2 to meet compliance requirements and to lower overall environmental quality program life cycle costs. The revisions should include revalidation and documentation of the key plan elements identified in section 3-6.3c above. Activities shall provide a copy of the revised plan to the Naval Facilities Engineering Service Center.

Submit requests for waivers of this policy to CNO(N451) via the appropriate chain of command. Waiver requests should cite State and/or local requirements specifying a different update cycle or demonstrate significant savings without negative program impact.

e. Establish or revise, as necessary, and implement procedures to control, track, and reduce the variety and quantities of HM in use, in storage or stock, or disposed of as HW per the Navy CHRIMP manual. This includes establishing HAZMINCENs to facilitate the central management of all HM at a facility.

A) f. Implement HSMS at the facility. This includes identifying an MSDS, industrial type process, and EPA waste stream for each manufacturer-specific HM used within the facility. It also includes adapting previously developed process algorithms or developing new ones for each of the identified processes.

g. Develop, revise as necessary, and implement a facility level HM AUL using an inventory that identifies and quantifies HM, in cluding categorizing the material as an extremely hazardous substance, hazardous substance, or toxic chemical as defined under EPCRA (see chapter 4).

h. Limit local purchases of HM to purchases for which a stock numbered product is unavailable from the supply system and for which there is a valid controlling document (e.g., maintenance requirement card (MRC), maintenance requirement plan (MRP), technical manual, technical order, maintenance manual, or similar document). Make and control local purchases through the HAZMINCEN according to CHRIMP principles of HM management and adhere to the same requirements as any other HM stock procurement. In cases where a standard stock item appears inferior, provide complete information regarding the item to the supply officer who can then submit an HM AUL feedback report to document the apparent deficiency.

i. Ensure facility level supply functions establish and implement a local shelf life control and management program.

j. Submit P2 Program Metric data annually to the cognizant major claimant via the P2 Annual Data Summary (P2ADS).

k. Use the PEPP program to support implementation of the activity Pollution Prevention Plan and support the goals of the Navy EQI.

CHAPTER 4

PROCEDURES FOR IMPLEMENTING THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA)

4-1 Scope

a. This chapter provides Emergency Planning and Community Right-to-Know Act (EPCRA) policies and procedures applicable to all Navy shore installation operations in the customs territory of the United States and Guam.

R) b. This chapter implements the requirements of E.O. 12856 of 3 August 1993, which requires Federal agency compliance with EPCRA. The Navy shall comply with EPCRA requirements of E.O. 12856 and all related Navy and Department of Defense (DOD) policy in the customs territory of the United States. As a matter of voluntary compliance, the Navy will comply with EPCRA requirements of E.O. 12856 and all related Navy and DOD policy in Guam. Neither the E.O., nor this chapter, imposes any requirements directly upon ships. Cognizant shore installations shall account in their reporting requirements for hazardous materials transferred to and from Navy ships.

A) c. At the time of printing, E.O. 12856 was under revision. Should changes to this policy result from the revised executive order, policy will be issued under CNO letter and incorporated into this instruction at the next printing.

A) Additionally, DOD is issuing staged guidance for application of EPCRA requirements to munitions operations. The initial stage requiring application of EPCRA to munitions manufacturing and munitions demilitarization operations has been signed, and policy is covered in this chapter. The second and final stage of guidance relating to range operations is currently in coordination and not signed at the time of printing. Changes to this instruction resulting from the additional DOD guidance will be issued under CNO letter and incorporated at the next printing.

4-1.1 References. Relevant references are:

a. 40 CFR 355, EPA Regulations for Emergency Planning and Notification Under CERCLA;

b. 29 CFR 1910.1200, OSHA Hazard Communication Standard;

c. 49 CFR 173.2, Shippers - General Requirements for Shipments and Packaging;

d. 40 CFR 261, Identification and Listing of Hazardous Waste;

e. 40 CFR 302, EPA Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under CERCLA;

f. 40 CFR 372, EPA Toxic Chemical Release Reporting Regulations;

g. OPNAVINST 5100.23E, Navy Occupational Safety and Health (NAVOSH) Program Manual; (D

4-2 Legislation

4-2.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA provides funding and enforcement authority for the clean up of waste disposal sites and for responding to hazardous substance spills. CERCLA establishes a comprehensive response program for past hazardous waste (HW) installations, and the planning and response framework for hazardous substance releases.

4-2.2 Emergency Planning and Community Right-to-Know Act (EPCRA). This is title III of the Superfund Amendments and Reauthorization Act (SARA) which encourages and supports emergency planning and provides timely and comprehensive information to the public about the hazards associated with toxic chemical releases. Most notably, specific sections of EPCRA require immediate notification of releases of extremely hazardous substances and hazardous substances defined under the CERCLA to State and local emergency response planners. Additionally, EPCRA requires State and local coordination in planning response actions to chemical emergencies. The Act requires the submission and public disclosure of information on chemical inventories and releases and is made applicable to Navy facilities through E.O. 12856.

4-2.3 Occupational Safety and Health Act (OSHA). OSHA directs employers to establish and maintain comprehensive and effective occupational safety and health programs.

4-3 Terms and Definitions

4-3.1 Agency. An executive agency of the Federal government. Military departments fall under DOD.

4.3.2 Article. A manufactured item formed to a specific shape or design during manufacture and has end use functions dependent in whole or in part upon its shape or design during end use and which does not release, or otherwise result in exposure to, a toxic chemical under normal conditions of use.

4-3.3 Authorized Use List (AUL). The list of all hazardous material (HM) necessary to support the requirements of a command, facility, or installation.

4-3.4 Covered Facility. All facilities that meet one or more of the threshold reporting requirements under any section of EPCRA.

4-3.5 Depot Maintenance. Material maintenance requiring major overhaul or a complete rebuilding of parts, assemblies, subassemblies and end items, including the manufacture of parts, modification, testing, and reclamation. Depot maintenance serves to support lower categories of maintenance by providing technical assistance, sometimes beyond their responsibility. Depot maintenance provides stock of serviceable equipment because it has more extensive facilities available for repair than are available in lower maintenance installations. Depot maintenance includes all aspects of software maintenance.

4-3.6 Extremely Hazardous Substance (EHS). Any substance listed in appendix A or B of reference (a).

4-3.7 Facility. All buildings, equipment, structures, and other stationary items located on a single site or on contiguous or adjacent sites, owned or operated by the same person, otherwise known as the "host" or the "fenceline owner." For the purposes of Section 304 of EPCRA, the term includes motor vehicles, rolling stock, and aircraft.

4-3.8 Hazardous Chemical (HC). A chemical that is a physical or health hazard as defined in reference (b).

4-3.9 HM. Any material that is regulated as HM per reference (c) requires a material safety data sheet (MSDS) per reference (b) or, which during end use, treatment, handling, packaging, storage, transportation, or disposal, meets, has components which meet, or has the potential to meet the definition of HM as defined by reference (d) subparts A, B, C, and D. In general, any material, which because of its quantity, concentra-

tion, or physical, chemical, or infectious characteristics, may pose a substantial hazard to human health or the environment. Included in this definition are all EHSs, HCs, hazardous substances (HSs), and toxic chemicals (TCs).

Any other hazard-specific guidance (instructions or directives) takes precedence over this instruction for control purposes of HM. Such materials include: ammunition, weapons, explosives and explosive-actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical materials, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos and mercury. These materials are hazardous and exposure to personnel may occur during manufacture, storage, use, and demilitarization of these items.

4-3.10 Hazardous Substance (HS). Any substance listed in Table 302.4 of reference (e).

4-3.11 Intermediate-Level Maintenance. Material maintenance that is the responsibility of, and performed by, designated maintenance installations in support of using organizations. The intermediate maintenance mission is to enhance and sustain the combat readiness and mission capability of supported installations providing quality and timely material support at the nearest location with the lowest practical resource expenditure. Intermediate-level maintenance includes: limited repair of commodity-oriented components and end-items; job shop, bay, and production line operations for special mission requirements; repair of printed circuit boards, software maintenance, and fabrication or manufacture of repair parts assemblies, components, jigs and fixtures, when approved by higher levels.

4-3.12 Material Safety Data Sheet (MSDS). OSHA Form 174 or an equivalent form containing identical data elements used by manufacturers of chemical products to communicate to users the chemical, physical, and hazardous properties of their products.

4-3.13 Organization-Level Maintenance. Maintenance normally performed by an operating unit on a day-to-day basis in support of its own operations. The organization-level maintenance mission is to maintain assigned equipment in a full mission-capable status while continually improving the process. Group organizational-level maintenance under the categories of "inspections," "servicing," "handling," and "preventive maintenance."

4-3.14 Release. Under EPCRA, release includes: pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any EHS, CERCLA release, HS or HC.

4-3.15 Reportable Quantity (RQ). The specified amount of any EHS or HS, which when released in excess of that amount to the environment, requires reporting under EPCRA Section 304. Appendices A and B of reference (a) and Table 302.4 of reference (e) list RQs. Some States may have more stringent limits set for RQs. Facilities should make every effort to comply with State and local requirements.

4-3.16 Threshold Planning Quantity (TPQ). The established amount of an EHS, which when present on-site at a facility in quantities equal to or greater than the TPQ, requires reporting under EPCRA Section 311 and notification under EPCRA Section 302. Appendices A and B of reference (a) list TPQs.

4-3.17 Toxic Chemical (TC). Any substance listed in reference (f).

4-4 Requirements

4-4.1 EPCRA Policy for Federal Agencies. Since 1994, all Federal agencies are required to comply with the provisions in Sections 301-303, 304, 311-312, and 313 of EPCRA, all implementing regulations, and future amendments.

A) After extensive efforts to identify and define applicable munitions operations and associated releases, DOD is now issuing staged guidance on application of EPCRA requirements to munitions operations. Since calendar year 1998, installations have been required to fully comply with sections 302, 304, and 311-312 for munitions and munitions related items as specified in this chapter. Since 1998, installations have had to fully comply with section 313 requirements for the manufacture, processing, or otherwise use of toxic chemicals to produce munitions. Beginning calendar year 1999, installations shall comply, as specified in this chapter, with section 313 requirements for the testing and demilitarization operations of munitions and munitions related items. Application of EPCRA to range operations is currently pending.

A) a. **Primary Purpose of Emergency Planning and Report Notifications** is to protect public health, safety, and the environment, and to establish and coordinate the nation's chemical emergency planning activities.

R) b. **Section 302** is to inform emergency planners about the presence of extremely hazardous substances. A facility that has, on-site, any EHS, including those in munitions and munition related items, in a quantity equal to or in excess of its applicable TPQ, shall provide a one-time notification to the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC) (or equivalent for your jurisdiction) that the facility is subject to the emergency planning requirements of EPCRA for that substance. Include the facility name, facility point of contact, an alternative point of contact, and phone numbers. Thereafter, if an EHS becomes present at the facility in excess of its TPQ, or if the EHS list is revised and the facility has present an EHS in excess of the TPQ, the facility shall amend the original notification to the SERC and LEPC (or equivalent for your jurisdiction) to include the additional substance within 60 days of receiving the new information or the EHS.

c. **Under Section 303**, a covered facility shall provide any emergency planning information requested by the LEPC (or equivalent for its jurisdiction), to the extent practical, while taking into consideration national security issues. As a minimum, a facility subject to EPCRA reporting requirements will appoint a facility representative to actively serve on the LEPC (or equivalent for its jurisdiction).

d. **Section 304**, protects the public in the event of hazardous chemical releases through the establishment and formation of local and state emergency response capabilities. A facility where an EHS or HS is produced, used, or stored shall provide an immediate verbal and written follow-up notice of any EHS or HS, including those from munitions and munitions related items, released over a 24-hour period into any environmental media that meets the established RQ. Notify all SERCs and all LEPCs (or equivalent for its jurisdiction) for areas likely to be effected by the release. This notice does not relieve the facility of any notification requirements covered under other environmental regulations. (R

Notification to the SERC or LEPC (or equivalent for its jurisdiction) is not required for releases that result in exposure to personnel solely within the boundaries of the facility, regardless of whether the RQ for the substance was met.

R) e. **Section 311** is to increase community awareness of chemical hazards. A facility with any HCs, including those associated with munitions and munitions related items, present on-site at any one time in an amount equal to or greater than 10,000 pounds, or equal to or greater than 500 pounds for an EHS or the applicable TPQ (whichever is less), and requiring an MSDS under OSHA, shall provide a one-time submission of copies of those MSDSs or a list of the HCs grouped by hazard category to the SERC, LEPC (or equivalent for its jurisdiction), and the local fire department with jurisdiction over the facility. Facilities should contact the local agency to identify their preference for data submission. Thereafter, should an HC become present in amounts equal to or over established thresholds or, should significant new information be discovered concerning the HCs for which a submission was previously made, the facility shall provide a new or revised submission within 3 months.

Stored munitions end items are considered to be "a solid in any manufactured item" and therefore the chemicals contained in munitions end items are not included in the threshold calculation or reporting in this section.

Should the SERC, LEPC (or equivalent for its jurisdiction), or local fire department with jurisdiction over the facility request an MSDS not previously submitted, the facility shall submit the requested MSDS within 30 days of receipt of the request. The minimum threshold for reporting in response to a request for submission is zero.

R) f. **Section 312** provides comprehensive information about the identity and amounts of stored chemicals and makes the information available to the public, emergency planners, and responders. A facility meeting Section 311 reporting requirements shall submit an annual Emergency and Hazardous Chemical Inventory Form (Tier I or Tier II) for applicable HCs. The annual submission is due on 1 March for the previous calendar year.

Should the SERC, LEPC (or equivalent for its jurisdiction), or local fire department with jurisdiction over the facility request a Tier II form not previously submitted, the facility shall submit the requested form within 30 days of receipt of the request. The minimum threshold for reporting in response to a written request for submission is zero.

g. **Section 313** is to establish a facility-wide inventory of toxic chemical releases to all environmental media, to support State and local planning efforts and to inform the public about routine releases of toxic chemicals to the environment. A facility that has 10 or more full-time employees, and manufactures or processes any listed TC in excess of 25,000 pounds, or that otherwise uses any listed TC in a quantity over 10,000 pounds in a calendar year, is required to submit individual release data, a Form R, for each applicable TC. (R

The manufacture, process or otherwise use of TCs to produce munitions related items is covered under this section. The demilitarization of munitions and munitions related items, including disassembly, dismantling, recycling, recovery, reclamation, and reuse, is considered a processing activity and is covered under this section. The demilitarization activities including open burning and open detonation (OB/OD), incineration, chemical neutralization and other methods of final treatment that alter the chemical composition of the munitions and its components is considered treatment and is covered under this section.
The annual submission will be 1 July for the previous calendar year.

h. Federal agencies are required to develop voluntary goals to reduce the agency's total releases of TCs to the environment from covered (R

facilities by 50 percent by 31 December 1999. Federal agencies will publicly report baseline information for this goal on 1994 Form R reports. Federal agencies will calculate and monitor reductions using future Form R reporting. The baseline and reductions reported will not include releases and off-site transfers associate with munitions and munitions related items.

4-5 Navy Policy

a. Navy policy is to comply with all requirements of EPCRA as described in E.O. 12856. Navy facilities are encouraged but not required to comply with additional State or local EPCRA program requirements. Navy installations should comply with State or local EPCRA program requirements to the extent that resources allow, and provided such compliance does not interfere with command mission accomplishment or other legal obligations.

R) b. The Navy shall act to use the data generated through EPCRA data gathering and reporting information to prevent pollution by reducing HM use and decreasing the release of toxic chemicals into the environment to the minimum amounts achievable. Navy facilities shall use EPCRA data to provide input and updates to facility Pollution Prevention Plans as discussed in chapter 3.

4-5.1 Compliance with Federal EPCRA Requirements. All Navy shore installations shall use the following procedures in the customs territory of the United States and Guam in complying with EPCRA:

a. All installations shall define the facility fenceline and operations within that fenceline that require EPCRA documentation. Installations shall update Interservice Support Agreements (ISAs), as well as any other Host-Tenant agreements, to reflect the data collection requirements of the tenants to the host.

(1) Class I property lines most appropriately define the facility fenceline with the fenceline owner responsible for all DOD tenants. The fenceline owner, otherwise known as the "host" command, shall file one report for the entire facility for each section of EPCRA requiring a report. All calculations will include combined totals from within the fenceline. Navy installations shall not report actions of non-DOD Federal agencies. Navy tenants of non-DOD host installations are independently responsible for meeting the Navy EPCRA reporting requirements.

(2) The owner of geographically separated portions of a covered facility may treat each establishment it operates as a separate facility. Independent owners of contiguous or adjacent sites are individually responsible for meeting all EPCRA reporting requirements.

b. Private contract operators on DOD facilities and Government-Owned and Contractor-Operated (GOCO) facilities are legally required to comply with all provisions of EPCRA to the extent that their operations meet threshold and other requirements of the statute and implementing regulations. The Navy encourages GOCO facilities to support Navy efforts in meeting any additional reporting requirements.

c. For purposes of emergency planning, all facilities shall determine whether they meet or exceed threshold requirements for an EHS or HS used at the facility. Each Navy facility that exceeds a threshold is subject to the reporting requirements of EPCRA for emergency planning, providing information, and emergency notification. Host commands shall calculate thresholds using the entire facility inventory. (R

(1) Each facility that meets or exceeds a TPQ for an EHS shall notify the SERC and the LEPC (or equivalent for its jurisdiction) and provide a facility point of contact, an alternative point of contact, and telephone numbers.

A) (2) Facilities shall include EHS contained in munitions and munitions-related items. Munitions and munitions-related items containing EHS must be included in all facility calculations for threshold requirements and will report as required.

(3) If an EHS later becomes present at the facility in excess of its TPQ, or if the EHS list is revised and the facility has present an EHS in excess of the TPQ, the facility shall amend the original notification to the SERC and LEPC (or equivalent for its jurisdiction) to include the additional substance within 60 days.

(4) Each covered facility shall request to participate in local emergency planning functions and appoint a facility representative to actively serve on the LEPC (or equivalent for its jurisdiction). To the extent practicable, each covered facility shall provide any emergency planning information requested by the LEPC (or equivalent for its jurisdiction), while taking into consideration national security issues.

R) d. For emergency notification reporting, each facility that releases an EHS or HS, including those from munitions and munitions-related items, in excess of the RQ for that substance into any environmental media shall immediately notify all SERCs and LEPCs (or equivalent for its jurisdiction) in the area likely to be effected by the release of that substance. The facility shall submit a written follow-up notification of the release and actions taken as soon as practicable after the release. To expedite the notification process, the facility shall prepare and use a standard form and approval chain in the event of a reportable release. The installation shall also notify the cognizant major claimant of the release in message form as soon as practicable after the release has occurred. The facility is not required to notify the SERC or LEPC (or equivalent for your jurisdiction) of releases that result in exposure to personnel solely within the boundaries of the facility regardless of whether the RQ for that substance was exceeded.

e. For community awareness, all installations shall determine if they meet or exceed threshold requirements for all HCs they possess that require an MSDS. This section includes those HCs associated with munitions and munitions-related items. However, stored munitions end items are considered to be "a solid in any manufactured item" and therefore, the chemicals contained in munitions end items are not included in the threshold calculation or reporting in this section. Each Navy facility that exceeds the threshold is subject to the reporting requirements of EPCRA for community right-to-know provisions. Host commands shall calculate thresholds using the entire facility inventory. (R

If the quantity of an HC is present at any one time in amounts equal to or greater than 10,000 pounds, it is reportable. If the substance is an EHS and the amount present at any one time is equal to or greater than 500 pounds or its TPQ, whichever is less, it is reportable. For each reportable HC, facilities shall provide a one-time submission of a copy of the MSDS or a list of reportable HCs, grouped by hazard category, to the SERC, LEPC (or equivalent for your jurisdiction), and the fire department with jurisdiction over the facility. Facilities should contact local agencies to identify their preferred method of data submission. A hard copy MSDS obtained from the Hazardous Material Information System (HMIS) is sufficient; see reference (g) for information on HMIS. The facilities should make the submissions to the fire department that would

routinely be the first alerted during an emergency. This would generally be the Navy fire department located on the installation but may also be a non-Navy fire department separate from the facility.

If a facility submits a list, it shall contain the following information:

(1) A list of the HCs for which an MSDS is required under OSHA regulations, grouped by hazard category. Only include those chemicals (either in mixtures or in the pure form) that meet or exceed threshold levels.

(2) The HC listed under all applicable hazard categories.

(3) The chemical and common name of each HC as provided on the MSDS.

Should the SERC, LEPC (or equivalent for your jurisdiction), or local fire department with jurisdiction over the facility request an MSDS not previously submitted, the facility shall submit the requested MSDS within 30 days of receipt of the request. The minimum threshold for reporting in response to a request for submission is zero.

Should an HC become present over established thresholds or should significant new information concerning the HCs for which a submission was previously made become available, the facility shall provide a new or revised submission within 3 months after discovery of this new information.

R) f. To provide comprehensive information about the identity and amounts of chemical hazards, facilities meeting or exceeding HC threshold requirements shall submit Emergency and Hazardous Chemical Inventory Forms for those HCs to the SERC, LEPC (or equivalent for their jurisdiction), and the local fire department with jurisdiction over the facility by 1 March, annually, that cover the previous calendar year's inventory. Facilities may submit either Tier I or Tier II information; however, they are not required to comply with requests to use any form other than the Federal Tier I or Tier II forms.

The SERC and the LEPC (or equivalent for their jurisdiction) have the authority to request a Tier II submission for HCs present at the facility below threshold levels if the requester provides a written statement of need. Should the SERC, LEPC (or equivalent for their jurisdiction), or local fire department with jurisdiction over the facility request a Tier II form not previously submitted, the facility shall submit the requested form within 30 days of receipt of the request. The minimum threshold for reporting in response to a request for submission is zero.

g. To establish a facility-wide inventory of toxic chemical releases, all facilities shall determine if they meet reporting requirements for Toxic Release Inventory (TRI) Reporting, Environmental Protection Agency (EPA) Form R. Host commands shall ensure thresholds are calculated using the entire facility inventory. Base the TRI reporting requirements on the following criteria: (R

(1) The facility has 10 or more full-time employees; and

(2) The facility manufactured (defined to include imported) or processed a TC in quantities in excess of 25,000 pounds over the course of a calendar year; or

(3) The facility otherwise used a TC in quantities in excess of 10,000 pounds over the course of a calendar year.

These thresholds are TC and activity-specific, and do not include storage or the amount present at any one time.

A) The manufacture, process or otherwise use of TCs to produce munitions-related items is covered under this section. The demilitarization of munitions and munitions-related items, including disassembly, dismantling, recycling, recovery, reclamation, and reuse, is considered a processing activity and is covered under this section. The demilitarization activities including OB/OD, incineration, chemical neutralization and other methods of final treatment that alter the chemical composition of the munitions and its components are considered treatment and are covered under this section. All munitions treated on-site shall be counted. Munitions included on ranges is a subject still under consideration and will be covered in subsequent guidance.

Navy installations shall not use the alternative threshold certification statement option, Form A.

R) Navy facilities will make every attempt to submit Form Rs to EPA covering GOCO information as required in this chapter. The facility shall provide U.S. Navy GOCO information on a separate government-submitted Form R. The government Form R submission shall list U.S. DOD Navy as the "parent company" under section 5.1 of the form. If the Navy is unable to obtain GOCO information or Form Rs, the Navy facility shall, at a minimum, provide the contractor's name, technical contact, and facility location to CNO (N45).

By entering only the government submitted form to the automated EPA database, EPA will avoid database double counting of these releases.

TCs stored aboard ship while a ship is in port do not become part of the shore facility's inventory and are not reported by the shore facility. Material maintained under ship's custody is not subject to reporting requirements. The transfer of a TC to or from a Navy ship is not considered to be a manufacture, process, or other use of a TC and, therefore, shall not be used by a facility to calculate threshold requirements. If the TC has triggered the reporting requirement elsewhere however, the facility shall include transfers to ships as off-site transfers in the Form R release calculations. Consider floating dry-docks as part of the shore facility and report them accordingly.

h. EPCRA regulations provide certain exemptions that are intended to relieve facilities from the burden of making threshold and release calculations based on small or ancillary uses of listed TCs. Five primary categories exist under the exemptions, including *de minimis*, article, use, laboratory, and property ownership. In general, the use exemption does not apply to TCs manufactured, processed, or otherwise used. The use and laboratory categories apply to Navy facilities in the following manner:

(1) The structural component category exempts TCs that are structural components of the facility or that are used to ensure or improve structural or functional integrity. The facility can apply this exemption to listed TCs found in material that is part of the facility's structure (i.e., copper in copper piping used for the plumbing in the facility). The facility does not have to account for releases resulting from passive degradation that naturally occurs in structural components of a facility.

Maintenance and repair activities performed by facility maintenance to the facility infrastructure are also consistent with the "structural component" exemption. Include painting to maintain the physical integrity or function of the facility in the exemption. The exemption also covers small amounts of material passively abraded or corroded from pipes and other facility equipment. Include in the facility infrastructure, but do not limit to: buildings, roads, runways, fencelines, and utilities.

(2) The routine janitorial and grounds maintenance category exempts the use of TCs contained in products for routine janitorial and installations grounds maintenance. The routine maintenance exemption covers janitorial or other custodial maintenance and all other installation grounds maintenance for activities using substances such as cleaning supplies, fertilizers, pesticides, fungicides, herbicides, rodenticides, and insecticides similar in type and concentration to consumer products. For example, facilities do not have to report the use of TCs for lawn maintenance, building maintenance, and grounds maintenance.

(3) The personal use category exempts the personal use of listed TCs in products used by employees or other persons at the facility. This exemption also covers activities associated with facility-operated cafeterias, commissaries, DOD Exchanges, medical facilities or facilities associated with morale, welfare, and recreation (MWR). "Personal use" products include foods, drugs, cosmetics, office supplies, and other personal items. The personal use exemption also covers toxic chemicals used strictly for reasons of personal comfort, necessity, or other such purposes, for example, heating and air conditioning units or lighting fixtures.

Navy policy exempts activities associated with hospitals and other base medical facilities from toxic release inventory threshold and release calculations as such activities are exempted under the personal use exemption of the EPCRA regulations.

(4) The motor vehicle category exempts TCs contained in products used for the purpose of maintaining motor vehicles operated by a facility. Facilities are exempt from reporting the use of TCs associated with the maintenance of motor vehicles, such as staff cars, base maintenance and support vehicles, and privately owned vehicles used on the installation. Large combined fleets of motor vehicles maintained at one central location are not exempt.

Facilities are not exempt from reporting the TCs used at the Intermediate and Depot Level for the maintenance of the tactical vehicles, aircraft (including missiles), and ships. Shore facilities are not exempt from reporting TCs used by shore based maintenance in repairing and painting ships that are in port or in dry-dock. TCs used on board ship by ship's company for organizational level maintenance are exempt. Maintenance below Intermediate and Depot Level (e.g., Organizational Level) maintenance is exempt. For example, field or organizational level units are exempt from reporting TCs used in the maintenance of vehicles outside the Intermediate and Depot Level maintenance shop. Similarly, personnel maintaining aircraft and vehicles under field conditions and personnel maintaining ships at sea are exempt from reporting their use of TCs.

(5) The motor vehicle maintenance category applied for fuels exempts TCs associated with the transfer of fuel from non-stationary sources of fuel, for example tanker trucks. Emissions from mobile sources are exempt. The fueling of vehicles from stationary sources of fuel and bulk fuel storage, including movable bulk storage tanks, is exempt from threshold and release calculations.

(6) The intake water/air category exempts facilities from reporting TCs present in process water or no-contact cooling water as drawn from the environment or from municipal sources. The exemption also covers TCs present in air used either as compressed air or as part of combustion.

(7) The laboratory activity category applies to those listed TCs manufactured, processed, or otherwise used in a laboratory for quality control, research and development, and other (R

laboratory activities. The manufacture, process, or otherwise use of TCs for the purpose of testing munitions, weapons systems or qualifying munitions by personnel as part of the testing process is considered part of this exemption. This exemption should be applied as narrowly as possible. It is not intended as a blanket exemption for any facility that has the title "laboratory" in its name. To qualify, the listed TCs must be directly used in, or produced by, a laboratory activity at a Navy facility. The manufacture, processing, or other use must occur under the supervision of a technically qualified individual. Generally, consider bench-scale activities exempt. Activities that do not directly support research and development, sampling and analysis or quality assurance and control are not exempt. Specialty chemical production and pilot plant scale activities do not qualify for the laboratory activities exemption.

R) Facilities were not required to report information for munitions for CY 1994, 1995, 1996, or 1997 submissions. Since CY 1998, reporting of munitions has been required as directed by this chapter.

Facilities shall submit a separate and complete electronic Form R to the EPA and the State for each TC meeting threshold requirements. The Form R shall cover not only the triggering activity but all uses of the TC at the facility. Installations shall use actual numbers vice range codes for all areas on the Form R. The annual submission is due by 1 July covering the previous calendar year releases. Installations shall submit an electronic copy of all Form Rs to the cognizant major claimant who shall forward the electronic form to CNO (N45) by 1 August for accurate measurement of the total annual releases and off-site transfers of reported TCs by Navy installations.

D) Facilities shall ensure documentation is in place to support EPCRA reporting efforts. Facilities should have documentation and calculations for threshold and release decisions available to support any inquires. Facilities shall maintain support documentation for a minimum of 5 years.

Facilities shall cooperate fully with EPA regional personnel conducting EPCRA compliance reviews and inspections. Facilities should be prepared to provide, in a timely manner, information related to the calculation and preparation of all EPCRA reports. If information requested is not available or questioned by EPA personnel, installations shall explain in writing and should reference Navy guidance as applicable. If Navy policy or guidance is questioned, installations shall refer EPA personnel to CNO (N45). Installations shall not take any action inconsistent with Navy policy without approval from CNO (N45). (A

The Navy's policy is to make Form R's readily available to the public upon request without requiring Freedom of Information requests.

i. By 31 December 1999, each major claimant shall meet an aggregate 50 percent reduction from a 1994 baseline of total releases and off-site transfers of TCs to the environment by its facilities. Claimants may assign differing goals to installations based on assessment of progress already achieved and the opportunity for realizing additional reductions in a cost effective manner. Installations should approach reduction efforts in a total quality leadership manner striving for continuous improvement regardless of numeric goal settings. Installations shall use as baseline information for this goal publicly reported 1994 Form R reports. Reductions will be calculated and monitored annually through future Form R reporting. The baseline and reductions reported will not include releases and off-site transfers associated with munitions and munitions related items. (R

(1) The actual baseline is the total volume of TCs that appear on the EPA Form R

Section 8.1, Quantity Released and Section 8.7, Quantity Treated Off-Site. Section 8.1 is a compilation of Section 5, and Section 6.2 (disposal codes only: M10, M71, M72, M73, M79, M90, M94, M99) minus Section 8.8 (events associated with catastrophic events) data. Section 8.7 includes Section 6.2 (waste treatment codes: M40, M50, M54, M61, M69, M95) and Section 6.1 data.

(2) CNO (N45) will use the annual sum of Sections 8.1 and 8.7 of all submitted Form Rs to track progress in meeting the 50 percent reduction goal.

j. Prior to the release of any reports to the SERC or LEPC (or equivalent for your jurisdiction), non-Navy fire departments, EPA, or the State, installations shall review the information to prevent the release of classified information. In cases where information regarding the use of a substance is classified, the installation shall develop alternative procedures for protecting the installation and off-site personnel.

k. Chapter 10 describes Navy policy and planning in relation to an accidental release of HS.

4-6 Responsibilities

4-6.1 The Chief of Naval Operations CNO (N45) shall:

a. Develop and implement Navy EPCRA policy.

b. Develop detailed guidance for use by installations in the implementation of EPCRA requirements.

c. Act as the assessment sponsor for accomplishing implementation of EPCRA and pollution prevention efforts at Navy installations.

d. Track and monitor Navy progress toward 50 percent reduction goal.

e. Provide Claimant-submitted Form R reports, status reports and updates to DOD annually.

4-6.2 COMNAVFACENGCOM shall:

a. Support EPCRA initiatives as tasked by CNO (N45).

b. Assist CNO (N45) in managing and analyzing EPCRA data.

c. Provide technical assistance to shore installations to implement EPCRA policy.

4-6.3 COMNAVSUPSYSCOM shall:

a. Assist the CNO (N45) in managing the HM aspects of the Navy EPCRA effort and serve as the overall manager for the supply aspects.

b. Provide support, as requested, to identify EPCRA-listed chemicals in supplied materials.

c. Develop, implement, and maintain a Navy-wide system for acquiring only authorized HM, integrating command and shore installation HM AULs to support reduced EPCRA reporting.

d. Provide guidance to, and coordinate efforts of the Navy-wide HM substitution efforts, including development of a substitution guidance document to support reduced EPCRA reporting.

e. Establish methods to reduce or minimize the entry of new HM into the supply system. Prior to the introduction of new HM into the system, a valid requirement for the HM must exist; a complete MSDS shall be locally available; and a review shall confirm that existing non-hazardous

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or less hazardous substitutes are not available to support reduced EPCRA reporting (see chapter 3 for details).

4-6.4 The Chief of Naval Education and Training (CNET) shall incorporate EPCRA guidance and policies into Navy training. Appropriate training courses shall include pollution prevention and source reduction initiatives as applicable to EPCRA requirements.

4-6.5 Major claimants shall:

a. Program, budget, and allocate funds for all identified installation EPCRA requirements.

b. Assist COMNAVSUPSYSCOM in developing and maintaining a centralized list of authorized HM or the approved, less hazardous substitutes. Ensure that installations under their cognizance use only those HMs that appear on the HM AUL in support of reducing EPCRA reporting requirements.

c. Develop and implement HM elimination/substitution processes for all systems and operations under their cognizance to support the reduction of EPCRA reporting.

d. Develop processes that ensure that the least hazardous, technically acceptable materials are incorporated into the installation AUL to improve EPCRA reporting efforts (see chapter 3 for details).

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e. Establish goals for facilities under their command to support the Navy 50 percent reduction goal of total releases of TCs to the environment by 31 December 1999. Advise CNO (N45) of individual installation goals as established.

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f. Notify CNO (N45) of any deficiencies cited by EPA inspectors during facility EPCRA reviews and inspections to provide appropriate lessons learned and required improvements to current policy and programs.

g. Compile and review all installation Form Rs and forward electronic copies to CNO (N45) annually by 1 August for accurate measurement of releases and off-site transfers of all TCs by Navy installations.

h. Compile and review facility information on actual number of installations meeting reporting requirements under all sections of EPCRA.

4-6.6 Commanders and commanding officers of shore installations shall refer to paragraph 4-5 for specific requirements and shall:

a. Define the facility fenceline, including all tenants, to support EPCRA reporting requirements. Revise and update ISAs to support these requirements.

b. Calculate all thresholds using the entire facility inventory and meet all reporting requirements according to EPCRA for that facility.

c. Review all publicly available data to prevent sensitive or classified information from being released. Sign each EPCRA Form R as the validating official or designate in writing alternate validating official.

d. Honor public requests for EPCRA information in a timely and informative manner. Ensure the public affairs office is onboard and aware of information.

e. Use data provided from EPCRA data collection and reporting in updating the installation comprehensive Pollution Prevention Plan (see chapter 3 for details).

f. Notify Major Claimant and regional environmental coordinator upon receiving notice (A

of EPA's intent to inspect for EPCRA compliance and of final results. Fully cooperate with EPA personnel to support EPCRA reviews and inspections.

g. Reduce the releases of TCs as established by the Major Claimant and identified in the Pollution Prevention Plan to support the Navy's 50 percent reduction of total releases of TCs to the environment by 31 December 1999 and reduction in EPCRA reporting requirements.

h. Develop and implement a local HM AUL using an inventory that identifies and quantifies HM, including whether the material is an EHS, HS, or TC.

i. Establish and implement procedures to control, track, and reduce the variety and quantities of HM in use, in storage or stock, or disposed of as HW, to support reduced EPCRA reporting.

j. Identify to the Major Claimant funding needed to support all EPCRA requirements.

4-6.7 Regional Environmental Coordinators (RECs) shall:

a. Coordinate with regulators, covered facilities, and CNO.

b. Disseminate policy and guidance information to covered facilities.

c. Support regional requests for public information on EPCRA information.

CHAPTER 5

CLEAN AIR ASHORE

5-1 Scope

This chapter applies to air emissions from stationary, mobile and area sources at all shore facilities within the United States, Commonwealth of Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Commonwealth of the Northern Marianas Islands. Chapter 18 provides Navy policy with respect to installations in foreign countries.

R) Refer to Chapter 6 for management of ozone depleting substances, Chapter 19 for the control of air emissions from ships and Chapter 26 for radon management.

5-1.1 References. Relevant references are:

R) a. 40 CFR, Parts 50-91 & 93, Environmental Protection Agency (EPA) Air Programs Regulations;

b. 29 CFR 1910.119, Process Safety Management of Hazardous Chemicals;

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A) c. Navy Title V Operating Permits Program Summary and Policy Guidance of 20 December 1995 (NOTAL);

d. 41 CFR Subchapter H, Parts 41-47 GSA Disposal Regulations;

e. 48 CFR Chapter 1, Federal Acquisition Regulation;

D) f. DOD Directive 4170.10 of 8 August 1991, Energy Management Policy; (NOTAL);

g. DOD Directive 5410.12 of 22 December 1987, Economic Adjustment Assistance to Defense-Impacted Communities; (NOTAL);

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(A h. DOD Base Reuse Implementation Manual, DOD 4165.66-M of July 1995; (NOTAL).

5-2 Legislation

5-2.1 Clean Air Act (CAA). The purpose of (R the CAA is "to protect and enhance the quality of the Nation's air resources so as to promote public health and welfare and the productive capacity of its population..." To achieve this goal, the CAA established two strategies for setting standards: (1) National Ambient Air Quality Standards (NAAQS) for six criteria pollutants; and (2) national emission standards for individual sources of hazardous air pollutants (HAPs). In addition, the CAA requires regulation of mobile sources of air emissions and a permit program for stationary sources. Refer to reference (a) for complete details of these requirements.

Achieving CAA standards is the responsibility of (R the States which must develop State implementation plans (SIPs) that outline to EPA how each State will achieve and maintain the standards. SIPs implement CAA programs such as the Title V operating permit, new source performance standards (NSPS), new source review (NSR), and national emission standards for hazardous air pollutants (NESHAPs) at the State and local level. States may require pollution control and prevention measures which are more stringent than those mandated by EPA, but may not allow measures which are less stringent. Federal agencies must comply with the requirements of Federal, State, interstate, and local air pollution control regulations.

The 1990 Amendments to the CAA introduced sweeping changes to the legislation. In order to improve air quality nationwide, the 1990 Amendments mandate the implementation of more

stringent pollution control and prevention measures which include: reclassification of nonattainment areas, regulation of mobile sources, regulation of 189 HAPs, regulation of sulfur dioxide (SO_2) and oxides of nitrogen (NO_X) for acid deposition control, implementation of an extensive operating permit program, and strengthening of the powers that allow EPA and State agencies to better enforce the provisions of the CAA.

5-2.2 Emergency Planning and Community Right to Know Act (EPCRA) of 1986. This Act, also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), addresses the release of hazardous substances (HS) to the environment. EPCRA calls for reporting releases of certain extremely hazardous substances (EHS) to the environment. Certain chemicals subject to the HAPs and risk management provisions of CAA Section 112 are also subject to Title III. See Chapters 4 and 12 for detailed requirements.

5-2.3 The Alternative Motor Fuels Act of 1988 (AMFA). Congress passed AMFA in 1988 to achieve long-term energy security and improve air quality. Under AMFA, a portion of the new vehicles which the Federal government acquires each year must be alternative fuel vehicles (AFVs) in order to encourage the production of these vehicles for consumer use.

5-2.4 The Energy Policy Act of 1992 (EPACT). EPACT seeks to enhance the long-term energy security of the nation by reducing dependency on imported oil and providing for improved energy efficiency. EPACT establishes a Federal leadership strategy designed to encourage automobile manufacturers and fuel suppliers to expand the commercial availability of alternative fuels and vehicles. Under EPACT, Federal agencies must acquire increasing numbers of AFVs.

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5-3 Terms and Definitions

5-3.1 Acid Rain. The acidic precipitation formed by the atmospheric chemical transformation of SO_2 and NO_X emissions.

5-3.2 Air Pollution Emergency Episodes. Air pollution emergency episodes exist when the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of individuals.

5-3.3 Alternative Fuels. Substitutes for traditional petroleum products such as gasoline and diesel fuel. EPACT defines alternative fuels to mean: methanol, denatured ethanol and other alcohols; mixtures containing 85 percent or more alcohol with the balance consisting of gasoline or other such fuels; natural gas; liquefied petroleum gas; hydrogen; coal-derived fuels; fuels derived from biological materials; electricity; and other substantially non-petroleum based fuels. (R

5-3.4 Best Available Control Measures (BACM). Emission control measures that achieve the greatest possible reduction in the emission of particulate matter.

5-3.5 Best Available Control Technology (BACT). Emission control technology to be applied to new sources located in areas that are in attainment of the NAAQS for the pollutants emitted from the new source. States are to apply BACT on a case-by-case basis, taking into account economic considerations. BACT must be at least as stringent as the NSPS for similar facilities.

5-3.6 Clean Alternative Fuels. Any fuel (including methanol, ethanol, fuel blends containing 85 percent or more alcohol, reformulated gasoline, diesel, natural gas, liquefied petroleum gas, and hydrogen) or power source (including electricity) used in a clean-fuel vehicle that meets the requirements and emission standards of the CAA. (R

5-3.7 Control Techniques Guidelines (CTG). Documents published by EPA designed to assist the States/localities in selecting the most appropriate technologies to apply for the control of major sources of air pollution.

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5-3.8 Federal Implementation Plan (FIP). A Federally-imposed air quality plan which supersedes a SIP due to a State's failure to develop an adequate plan to achieve and maintain the NAAQS.

5-3.9 Lowest Achievable Emission Rate (LAER). Rate of emissions that reflects the most stringent emission limitation contained in the implementation plan of any State for such class or category of source, or the most stringent emission limitation achieved in practice by such class or category of source, whichever is more stringent. The application of LAER shall not permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable NSPS.

R) **5-3.10 Major Source.** Any stationary source, or group of stationary sources located within a contiguous area and under common control, which emits, or has the potential to emit, air pollutants in excess of specified threshold levels. The threshold amounts vary according to the attainment classification of the area in which the source is located and the pollutant(s) emitted.

5-3.11 Maximum Achievable Control Technology (MACT). Emissions control technology that achieves the maximum emission reduction possible. MACT is applicable only to those pollutants listed as HAPs under Section 112 of the CAA.

5-3.12 Motor Vehicle. Any self-propelled vehicle designed for transporting persons or property on a street or highway.

5-3.13 National Ambient Air Quality Standards (NAAQS). Air quality standards established by EPA for six criteria pollutants in order to provide an adequate margin of safety in protecting the general health and welfare of the public. Criteria pollutants include: ozone (O_3), carbon monoxide (CO), particulate matter 10 microns or smaller (PM-10), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb).

5-3.14 National Emissions Standards for Hazardous Air Pollutants (NESHAPs). Standards established for categories of stationary sources that emit one or more of the HAPs listed under CAA section 112. (A

5-3.15 New Source Performance Standards (NSPS). National emission standards that limit the amount of pollution allowed from new or modified sources.

5-3.16 New Source Review (NSR). State program for reviewing major sources and modifications prior to construction in nonattainment or prevention of significant deterioration (PSD) program areas.

5-3.17 Nonattainment Area. An area which fails to meet the NAAQS for one or more of the criteria pollutants.

5-3.18 Non-road Engine. An internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards for stationary internal combustion engines or emission standards for new motor vehicles or new motor vehicle engines.

5-3.19 Non-road Vehicle. A vehicle powered by a non-road engine and that is not a motor vehicle or a vehicle used solely for competition.

5-3.20 Offsets. Emission reductions obtained from one source in order to compensate for increased emissions from another.

5-3.21 Title V Operating Permit. A Federally enforceable document issued by the States to significant stationary sources of air pollution that defines emission standards, operational procedures, and all obligations of the source under the CAA.

5-3.22 Oxygenated Gasoline. Gasoline which is blended with any one of a number of additives in order to increase the oxygen content, resulting in a more complete combustion and reduced emissions.

5-3.23 Ozone (O_3). The major constituent of "smog," ozone is formed when volatile organic compounds (VOCs) and NO_X react in sunlight. The atmosphere has two distinct layers of ozone. For air quality purposes, interest rests in the formation and transport of ground level ozone. At ground level, ozone has been shown to adversely affect the respiratory system and has proven to be the primary criteria pollutant causing regions to be declared in nonattainment of the NAAQS. At altitudes above 7 miles, stratospheric ozone plays a vital role in blocking out dangerous ultraviolet radiation. Recent evidence of a decline in stratospheric ozone levels has resulted in a world-wide call for the banning of ozone depleting substances (see Chapter 6).

5-3.24 Ozone Depleting Substances. Any chemical listed as a Class I or Class II substance in Section 602 of the CAA (see Chapter 6, Tables 6-1 and 6-2 for a list of Class I and Class II substances).

R) **5-3.25 Particulate Matter (PM).** A criteria air pollutant that includes dust, soot, and other small, solid materials that are released into and move around in the air. PM-10 is that portion of the total suspended particulate matter with an aerodynamic diameter of 10 microns or less.

5-3.26 Prevention of Significant Deterioration (PSD) Program. Emission control program that affects those areas with air quality that meet or exceed the NAAQS.

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5-3.27 Reasonably Available Control Technology (RACT). Emission control technology that achieves the lowest possible emissions level given technological and economic considerations. RACT is usually applied to existing stationary sources in nonattainment areas and often involves the installation of new control equipment on older sources.

5-3.28 Reformulated Gasoline. Gasoline which has undergone special distillation processes in order to meet performance requirements for NO_X emissions, oxygen content, benzene, heavy metals, VOCs, and toxic air pollutants.

5-3.29 State Implementation Plan (SIP). A plan developed by each State to implement, maintain, and enforce the NAAQS and other CAA goals within that State. While States have the primary responsibility for implementing the CAA, EPA maintains strong oversight in this process. (R

5-3.30 Stationary Source. Any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a non-road engine or non-road vehicle. (R

5-3.31 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. (R

5-4 Requirements

5-4.1 Regulatory Scheme. EPA has designated all areas in the country as unclassifiable, attainment, or nonattainment with respect to the NAAQS for each criteria pollutant. Areas are designated as follows:

a. **Unclassifiable.** Any area that cannot be classified on the basis of available information as

meeting or not meeting the NAAQS for the pollutant.

b. **Attainment.** Any area that meets the NAAQS for the pollutant.

c. **Nonattainment.** Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the NAAQS for the pollutant.

Certain regulatory requirements are fundamental and apply to all areas, regardless of their attainment status, while other more specific and stringent requirements apply only to nonattainment areas. For help in determining attainment designations, contact the State or local air pollution control office, or the appropriate EPA Regional Office (see Appendix C).

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5-4.2 General Requirements

5-4.2.1 Conformity Rule. Section 176(c) of the CAA prohibits Federal agencies from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP or FIP. EPA issued criteria and procedures for determining conformity, found in reference (a). Federal agencies must make a determination that a Federal action conforms to the SIP or FIP before proceeding with the action. Conformity determinations will typically be done as part of the National Environmental Policy Act (NEPA) analysis and documentation procedures for the planned action (See NEPA Procedures in Chapter 2).

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5-4.2.2 Enforcement/Citizen Suit Provisions.

R) a. **Waiver of Sovereign Immunity.** The broad waiver of Federal sovereign immunity in CAA Section 118(a) subjects Federal facilities to all Federal, interstate, State, and local air pollution requirements. States or local air districts generally enforce these CAA requirements; however, EPA also has enforcement authority for most CAA violations. Methods of enforcement include compliance orders, field citations, administrative assessment of civil penalties, civil judicial enforcement, and criminal enforcement. The CAA provides for penalties of up to $25,000 per day for each violation.

b. **State Civil Penalties.** In U.S. v. Georgia Department of Natural Resources, No. 1:94-CV-2993-JOF (Northern District Georgia, 2 August 1995), the Federal District Court held that CAA Section 118(a) does not waive Federal sovereign immunity for punitive civil fines and penalties assessed by a State government. (R

c. **Citizen Suits.** Civil actions may be brought against any person (including the United States) for present or past (if repeated) CAA violations of an emission standard, limitation, or order issued by EPA or a State. In addition, actions may be brought against any person who constructs without a required permit. (R

Penalties collected are deposited in a special U.S. Treasury fund to be used by EPA to finance air compliance and enforcement activities. At the Court's discretion, such funds can be used for beneficial mitigation projects consistent with the CAA and which enhance public health or the environment. The Court will ask EPA's view on any such projects. Amounts cannot exceed $100,000.

5-4.3 Provisions For Stationary Sources. In addition to compliance with the general requirements outlined above, the following additional standards apply to stationary sources only.

5-4.3.1 Title V Operating Permits. Title V of the CAA created an operating permit program which the States must develop and implement per EPA regulations establishing minimum requirements for State programs. Although the States are responsible for implementing and enforcing the permit program, EPA retains significant authority to oversee State implementation. EPA must review

and approve State permit programs, review proposed permits, veto improper permits and, if a State fails to adopt or implement an approved program, EPA will develop and implement a Federal permit program. The permit program attempts to clarify, in a single document, all the requirements applicable to a source, including requirements from the SIP, the acid rain program, and the air toxics program. The permit program also includes a requirement for payment of permit fees to finance the State air programs. After the effective date of any permit program approved under Title V, it is unlawful to violate any requirement of such a permit, or to operate a source subject to the permit program, except in compliance with a Title V permit. The program applies to all stationary sources of air pollution, including those operated on Federal facilities, that are subject to Federal regulation under the CAA.

a. **Permit Application.** Applications must be "timely" and "complete." An application is "timely" if it is submitted within 1 year of either the date of State program approval or of commencing operations for sources required to obtain preconstruction permits under the CAA Title I parts C or D. States must establish specific criteria to define a "complete" permit application.

An "application shield" is created if a timely and complete application is filed, allowing the source to operate without a permit pending the State's action on the permit.

b. **Certification.** A responsible official must certify permit applications as to their truth, accuracy and completeness after making reasonable inquiry. The certification must include the compliance status of the facility, and the method used to determine the compliance status.

5-4.3.2 Hazardous Air Pollutants (HAPs). Section 112 of the CAA lists an initial 189 pollutants as hazardous and subject to regulation and details Federal requirements for the control of HAPs. EPA retains the option of revising the list periodically as necessary.

a. **Source Definitions**

(1) **Major Source.** For HAPs, a major source is any stationary source, or group of stationary sources located within a contiguous area and under common control, which emits, or has the potential to emit, 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAPs.

(2) **Area Source.** An area source is any stationary source of HAPs that is not a major source. The term does not include motor vehicles or non-road vehicles.

b. **Source Categories.** Major and area sources are grouped into categories and subcategories. EPA must issue regulations establishing emission standards for the source categories and subcategories according to a phased-in schedule, with 25 percent of all categories and subcategories required to have standards by 1994, 50 percent by 1997, and 100 percent by 2000.

c. **Emission Standards.** EPA must establish technology-based emission standards that achieve the maximum degree of emissions reduction possible for new and existing sources in the appropriate category while giving consideration to cost, non-air quality health and environmental impacts, and energy requirements. Measures to achieve the desired emissions standards include: implementation of process changes; material substitutions; and measures to treat or control emissions, generally through the application of MACT.

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d. **Accidental Releases/Risk Management Plans.** Owners and operators of stationary sources that manufacture, process, use, handle or store EPA-regulated substances which exceed specified thresholds are required by CAA Section 112(r) to identify hazards from releases of such substances

and to design and maintain a safe facility to prevent releases and minimize the consequences of any accidental releases. Facilities that exceed the threshold limits must submit Risk Management Plans to EPA by 20 June 1999.

e. **Solid Waste Combustion.** Section 129 of the CAA directs EPA to establish NSPS for new solid waste incinerators and to develop performance guidelines for existing units. This includes municipal waste combustors, infectious waste incinerators, and industrial waste incinerators. Section 129 also requires incinerator emissions monitoring, training and certification programs.

5-4.3.3 Attainment Areas. The CAA mandates the implementation of emission limits and other measures for prevention of significant deterioration of air quality in those areas designated as being in attainment of the NAAQS. Facilities located in attainment areas must obtain a permit before any new construction or modification begins. The PSD permit application must include BACT review and selection; a growth-related impact analysis; ambient air quality analysis; and other information relative to preserving air quality.

5-4.4 Provisions For Mobile Sources

5-4.4.1 Aircraft. The CAA authorizes EPA, in consultation with the Secretary of Transportation, to develop emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines. No State or local air quality region may adopt or attempt to enforce any standard respecting emission of any air pollutant from any aircraft or engine unless such standard is identical to an applicable standard developed by EPA and the Secretary of Transportation. While limited regulation of aircraft engine emissions is possible, current regulations apply only to uninstalled aircraft engines (see 5-4.6.1).

R) **5-4.4.2 Non-road Engines.** Section 213(a) of the CAA directed EPA to conduct a study of emissions from non-road engines and vehicles to determine if their contribution to ozone or CO is significant. Based on this study, completed in November 1991, EPA determined that emissions from non-road engines are significant and began promulgating new non-road engine requirements. EPA has issued standards for spark-ignition non-road engines at or below 19 kilowatts (kW), compression-ignition nonroad engines at or above 37 kW, and gasoline spark-ignition and diesel compression-ignition marine engines.

5-4.4.3 Vehicle Inspection and Maintenance (I/M). Vehicle emissions testing is required in certain nonattainment areas. Federal installations in these areas must demonstrate compliance with State I/M programs for all motor vehicles operated on the installation even if the vehicle is not registered in that state. This requirement applies to all employee, military, contractor and Federally-owned/leased vehicles operated more than 60 days per year on the installation. Military tactical vehicles are exempt from the I/M program.

5-4.4.4 Fuels

a. **Leaded Gasoline.** The CAA prohibits the use of gasoline containing lead or lead additives in motor vehicles. (R

b. **Oxygenated Gasoline.** States that include all or part of an area designated nonattainment for CO and having a design value of 9.5 parts per million (ppm) or higher must include in their SIP a provision for the sale and dispensing of oxygenated gasoline in metropolitan areas within the nonattainment area. This provision is in effect during high CO portions of the year as determined by EPA. EPA may waive the requirement for oxygenated fuel if a State can satisfactorily demonstrate that imposition of such a provision interferes with the attainment of any other NAAQS.

c. **Reformulated Gasoline.** The nine worst ozone nonattainment areas with a 1980 population

greater than 250,000 were required to implement the use of reformulated gasoline beginning in 1995.

Other nonattainment areas may petition to opt-in to the reformulated gasoline program; however, if domestic supplies are found to be inadequate, EPA may delay by up to 3 years the extension of the program into these areas.

d. **Volatility.** To address the substantial release of VOCs into the atmosphere by volatilization of fuel, Federal guidelines limit the volatility of gasoline marketed during the high ozone season in the continental U.S. (CONUS).

R) e. **Diesel Fuel Sulfur Content.** Diesel fuel used in motor vehicles must not exceed a sulfur content of 0.05 percent by weight, or fail to meet a minimum cetane index of 40.

5-4.4.5 Clean Fuel Fleet/Alternative Fuel Vehicles. The CAA's clean-fuel vehicle requirements apply to owners/operators of centrally fueled fleets of 10 or more vehicles located in serious or above O_3 and serious CO nonattainment areas, with a 1980 Census population of 250,000 or more. Beginning with model year 1998, 30 percent of new light-duty fleet vehicle acquisitions must be clean-fuel vehicles; for model year 1999, that percentage increases to 50 percent, while after the year 2000, it must equal at least 70 percent.

The CAA mandates that any Federal facility that dispenses clean alternative fuels to Federal fleet vehicles must offer the fuel for sale to the public during reasonable business hours, subject to national security concerns and the commercial availability of such fuels in the vicinity of the facility.

5-4.5 Additional Requirements for Nonattainment Areas

5-4.5.1 Ozone (O_3)

a. **Marginal Nonattainment Areas.** Areas classified as marginal nonattainment for O_3 must institute the following provisions:

(1) The application of NSR requirements to major NO_X sources.

(2) The completion of an emissions inventory from all sources, to be updated every 3 years.

(3) The application of RACT requirements that were in effect prior to enactment of the CAA.

(4) A construction and operating permit program for new and modified sources.

(5) An emissions statement for stationary sources of VOCs and NO_X.

(6) An offset program that requires each new or modified major source of VOCs or NO_X to be offset by the ratio of 1.1 to 1.

In marginal nonattainment areas, a major source is defined as one which emits, or has the potential to emit, 100 tpy or more of VOCs or NO_X.

b. **Moderate Nonattainment Areas.** In addition to meeting the requirements of marginal areas, moderate nonattainment areas must also:

(1) Show reasonable further progress toward attainment through a 15 percent reduction in VOCs from the baseline by 1996.

(2) Apply RACT to all major stationary VOC and NO_X sources.

(3) Require Stage II vapor recovery systems for all facilities that distribute more than 10,000 gallons of gasoline per month or 50,000 gallons per month for independent small business marketers. Requirements for installation and operation of Stage II controls are effective for new

facilities (built after enactment of the CAA) within 6 months after a rule requiring Stage II controls is adopted in the State where the facility is located; within 1 year after adoption for existing facilities with 100,000 gallons or greater capacity (average monthly sales for 2 years prior to rule adoption date); or within 2 years for all other facilities.

(4) Initiate a basic vehicle I/M program.

(5) Have an offset program requiring each new or modified major source of VOCs or NO_X to be offset by the ratio of 1.15 to 1.

In moderate nonattainment areas, a major source is defined as one which emits, or has the potential to emit, 100 tpy or more of VOCs or NO_X.

c. **Serious Nonattainment Areas.** In addition to meeting the requirements of moderate nonattainment areas, serious nonattainment areas must also:

(1) Operate an enhanced ambient monitoring program for NO_X, O_3, and VOCs.

(2) Demonstrate that required provisions will lead to attainment through the use of computer modeling.

(3) Show reasonable further progress toward attainment through a 15 percent reduction in VOCs from the baseline by 1996, plus an additional 3 percent per year averaged over each consecutive 3 year period until attainment.

(4) Institute an enhanced vehicle I/M program to be enforced through denial of vehicle registration.

(5) Establish a clean-fuel fleet program in those areas having a 1980 census population of 250,000 or more.

(6) Have an offset program requiring each new or modified major source of VOCs or NO_X to be offset by the ratio of at least to 1.2 to 1.

In serious nonattainment areas, a major source is defined as one which emits, or has the potential to emit, 50 tpy or more of VOCs or NO_X.

d. **Severe Nonattainment Areas.** In addition to meeting the requirements of serious nonattainment areas, severe nonattainment areas must also:

(1) Identify and adopt enforceable transportation control measures to offset growth in vehicle miles traveled, and require employers of 100 or more persons to increase average vehicle occupancy by 25 percent.

(2) Have an offset program requiring each new or modified major source of VOCs or NO_X to be offset by the ratio of at least 1.3 to 1.

(3) Submit a plan detailing enforcement provisions to EPA by 31 December 2000.

In severe nonattainment areas, a major source is defined as one which emits, or has the potential to emit, 25 tpy or more of VOCs or NO_X.

e. **Extreme Nonattainment Areas.** In addition to meeting the requirements of severe nonattainment areas, States with extreme nonattainment areas must also:

(1) Have an offset program requiring each new or modified major source of VOCs or NO_X to be offset by the ratio of at least 1.5 to 1. An increase in emissions at a major source is not considered to be a modification subject to the 1.5 to 1 offset requirement if the owner/operator of the source elects to offset the increased emissions by a reduction in emissions from other operations, units, or activities within the source at an internal offset ratio of at least 1.3 to 1. (R

(2) Develop a plan requiring existing, new, or modified electric utility and industrial and commercial boilers emitting more than 25 tpy NO_X, to burn natural gas, methanol, ethanol or other clean fuel as their primary fuel or use advanced technology to control NO_X emissions.

In extreme nonattainment areas, a major source is defined as one which emits, or has the potential to emit, 10 tpy or more of VOCs or NO_X.

5-4.5.2 Carbon Monoxide (CO)

a. **Moderate Nonattainment Areas.** Areas designated moderate nonattainment have a design value between 9.1 and 16.4 ppm. Moderate nonattainment areas must:

(1) Submit an accurate inventory of all emission sources and update the inventory every 3 years until attainment of the NAAQS is achieved.

(2) Provide and update annually a forecast of vehicle miles traveled if the design value is 12.7 ppm or greater.

(3) Institute a vehicle I/M program with requirements equivalent to those for marginal ozone nonattainment areas, except that the program applies to CO. For those areas with a design value greater than 12.7 ppm, the requirements are the same as the enhanced I/M program required of serious ozone nonattainment areas, except that the program applies to CO.

(4) Institute a clean-fuel fleet program as is required in serious or above ozone nonattainment areas if the design value is 16 ppm or greater.

(5) Demonstrate attainment of the CO standard if the design value is greater than 12.7 ppm. Such a demonstration must incorporate specific annual emission reductions necessary to achieve attainment.

(6) Require the use of oxygenated fuel during high CO portions of the year in those areas with a design value of 9.5 ppm or above.

b. **Serious Nonattainment Areas.** Serious nonattainment areas have a design value of 16.5 ppm and above. In addition to all the requirements of moderate CO nonattainment areas with a design value of 12.7 ppm or higher, serious CO nonattainment areas must also:

(1) Require the same transportation control measures that apply to severe ozone nonattainment areas, except that CO is targeted.

(2) Implement an economic incentive program to encourage emissions reductions of 5 percent per year until attainment if compliance with the NAAQS is not attained by the specified attainment date. (R

In those serious nonattainment areas where stationary sources are believed to contribute substantially to ambient CO levels, a major source is any stationary source which emits, or has the potential to emit, 50 tpy of CO.

c. **Multi-State CO Nonattainment Areas.** A multi-State CO area exists if a CO nonattainment area is part of more than one State. In such an interstate situation, the affected States must coordinate the revision and implementation of the CO SIPs as they apply to the affected areas.

5-4.5.3 PM-10. Areas designated as nonattainment for PM-10 are initially classified as moderate nonattainment areas; any area that fails to attain by the specified attainment date is reclassified as serious. In addition, if EPA makes a determination that moderate nonattainment areas are unable to practicably achieve the NAAQS by the specified attainment date, they will be reclassified as serious nonattainment areas.

a. **Moderate Nonattainment Areas.** Areas designated as moderate nonattainment must

achieve attainment as quickly as possible but no later than 6 years after being classified as nonattainment. Extensions of attainment dates are possible if implementation requirements have been met and performance standards have been achieved. Provisions to achieve attainment include:

(1) A construction and operating permit program for new and modified stationary PM-10 sources.

(2) A demonstration (including air quality modeling) that the plan will provide for attainment by the applicable attainment date or a demonstration that attainment by such date is impracticable.

R) (3) The use of reasonably available control measures (RACM), including RACT, within 4 years of an area being classified as moderate nonattainment.

b. **Serious Nonattainment Areas.** In serious nonattainment areas, a major source of PM-10 is defined as one which emits, or has the potential to emit, 70 tons per year of PM-10. All of the requirements that apply to moderate nonattainment areas also apply to serious nonattainment areas. In addition:

(1) BACM must be implemented within 4 years of an area being classified as serious nonattainment.

R) (2) The area must submit a demonstration of attainment (or demonstration of the impracticability of attainment for those areas seeking an extension) within 4 years of designation to serious. However, areas reclassified as serious due to a failure to achieve attainment by the applicable deadline must submit a demonstration proving attainment within 18 months of such reclassification. Provisions outlining the BACM to be employed are also required within 18 months.

R)

(3) If a serious PM-10 nonattainment area fails to attain the NAAQS by the applicable deadline it must submit a demonstration of attainment that provides for an annual reduction of PM-10 emissions of at least 5 percent in the area, based upon the most recent emissions inventory. All attainment demonstrations must include quantitative milestones that demonstrate how reasonable further progress is to be achieved. Milestones must be achieved every 3 years until attainment is reached.

(4) EPA may waive any requirements for a serious PM-10 nonattainment area if it is determined that man-made sources do not significantly contribute to ambient PM-10 concentrations. Likewise, attainment dates may be waived if it is determined that sources which are not man-made contribute significantly to the violation of the NAAQS.

(5) Control measures for major stationary sources of PM-10 also apply to sources of PM-10 precursors, except where EPA has determined that such sources do not contribute to the elevated PM-10 concentrations observed in an area.

5-4.6 Miscellaneous Provisions

5-4.6.1 Jet Engine Test Cells. The CAA targets emissions from aircraft engine test cells by requiring EPA and the Department of Transportation (DOT), in consultation with DOD, to jointly study NO_X emissions from test cells. Following completion of the study, States may choose to adopt or enforce any standard for NO_X emissions from aircraft engine test cells "only after issuing a public notice stating whether such standards are in accordance with the findings of the study."

5-4.6.2 Federal Implementation Plans (FIPs). Section 110(c) of the CAA requires EPA to issue a FIP where a State has failed to make a required SIP submission, where the SIP submission does not satisfy the minimum criteria, or where a SIP

submission has been disapproved in whole or in part and the State has not corrected the deficiency in a timely manner. Typically EPA disapproves a SIP because it does not contain sufficiently strict requirements to demonstrate attainment. A FIP will generally contain requirements that apply to more types of sources and that control emissions in a more stringent manner than did the SIP.

5-4.6.3 Emission Reduction Credits (ERCs). Sections 110(a)(2)(A) and 172(c)(6) of the CAA authorize States, or their local air quality districts (AQDs), to establish, by regulation, a trading system for ERCs. ERCs are created when equipment that emits pollutants is removed from service or emissions from equipment remaining in service are reduced, provided that the emission reductions would not otherwise be required by the CAA or a current SIP, and the owner applies under the AQD regulations for credit for the reduction. Each ERC constitutes permission from the AQD to emit a stated amount of a specific air pollutant. Following validation by the AQD, ERCs may be transferred by sale, lease or other disposal method, for use by other emission sources within the same air quality district.

5-4.6.4 Exemptions for Certain Territories. Upon petition by the Governor of Guam, American Samoa, the U.S. Virgin Islands, or the Commonwealth of the Northern Marianas Islands, the Administrator of EPA may exempt any person or source in such territory from any CAA requirement other than those provisions concerning hazardous air pollutants or implementation plans for the achievement of the NAAQS. EPA may grant such exemptions based on the finding that compliance is not feasible or is unreasonable due to unique geographical, meteorological, or economic factors.

5-4.6.5 Federal Contractor Restrictions. No Federal agency may enter into a contract with any person convicted of a criminal offense under the CAA. This restriction applies to the procurement of goods, materials, and services to perform such contract at any facility which gave rise to such conviction if such facility is owned, leased, or supervised by such person.

5-4.6.6 Acid Rain. In order to reduce the detrimental environmental effects of acid rain, the CAA mandates large-scale reductions in the emissions of SO_2 and NO_X through an innovative market-based approach aimed at electric utility plants. The goal of Title IV is to reduce SO_2 emissions by 10 million tons past 1980 emission levels and to reduce NO_X emissions by 2 million tons past 1980 levels by the year 2000.

5-4.6.7 Aerospace and Marine Coatings. As required by the CAA, EPA issued NESHAPs and CTGs to control emissions from aerospace manufacturing and rework and shipbuilding and ship repair operations. The rules establish MACT and BACT requirements for aircraft and ship activities such as cleaning, painting, de-painting, maskant application, and waste handling. Generally, installations will achieve the necessary emission reductions through the use of compliant materials or control devices. Other requirements include testing, recordkeeping, and reporting protocols. Implementation of these rules may incur substantial cost and labor impacts. (R

5-4.6.8 Training. Every person who prepares or supervises the preparation of air emissions inventories, air emissions permit requests and air emissions reports must receive environmental overview training as specified in Chapter 24, specific comprehensive training in their assigned subject matter, and must be familiar with the provisions of this chapter. In addition, the CAA requires explicit training in many areas, including:

a. **Chemical Process Safety Management.** The CAA requires the issuance of a chemical process safety standard to protect employees from the dangers associated with accidental releases of highly hazardous chemicals in the workplace. The safety standard requires employers to: train employees in operating procedures; emphasize hazards and safe practices; ensure contractors and

contract employees are provided with appropriate information and training; and train and educate employees and contractors in emergency response in a manner as comprehensive and effective as that required by SARA. The standard and a list of highly hazardous chemicals can be found in reference (b).

R) b. **Solid Waste Incineration.** The CAA requires the training and certification of operators of high capacity (greater than 250 tons per day) solid waste incineration units and high-capacity fossil fuel fired plants. It is unlawful to operate any such unit unless each person with control over processes affecting emissions from the unit has satisfactorily completed a training program which meets EPA requirements.

5-5 Navy Policy

5-5.1 Stationary Sources

A) **5-5.1.1 Title V Permits.** Policy guidance on Navy compliance with the CAA Title V Operating Permits Program is provided in reference (c).

5-5.1.2 Fuel Standards. Navy commands shall comply with Navy and regulatory fuel composition requirements applicable to solid, liquid, and gaseous fuels for stationary fuel-burning equipment.

5-5.2 Mobile Sources

5-5.2.1 Tampering with Emission Controls. Navy personnel shall not permanently remove or render inoperative any device, or element of design, which is installed in a government motor vehicle or engine to comply with air quality regulations.

5-5.2.2 Fuel Standards. Navy commands shall comply with Navy and regulatory requirements for composition of fuels used in motor vehicles. Installations dispensing gasoline shall be equipped to dispense unleaded gasoline. The Navy shall not procure any gasoline-powered vehicle that cannot operate on unleaded gasoline.

5-5.2.3 Vehicle Inspection and Maintenance (I/M). Navy commands shall comply with State and local area vehicle emission I/M program requirements for fleet vehicles and all other vehicles operated on an installation. Commands shall furnish proof of compliance to the appropriate regulatory authority when required. Commands are authorized to develop I/M procedures for their fleet vehicles as a part of normal preventive maintenance programs. (R

5-5.2.4 Introduction of Alternative Fuel Vehicles (AFVs). Per the requirements of EPACT, the Navy shall introduce light-duty AFVs into administrative vehicle fleets. Introduction of AFVs will target fleets within nonattainment areas in order to ensure compliance with CAA requirements which will be effective starting in 1998.

The Navy shall work with other Federal agencies to maintain compatibility and inter-operability of AFVs and refueling sites. The Navy will select implementation sites to minimize cost, maximize inter-Federal cooperative efforts and develop infrastructure.

The Navy prefers original equipment manufacturer AFVs to AFV conversions. Vehicles converted shall meet, as a minimum, California Air Resources Board (or equivalent) certification requirements.

The Assistant Secretary of the Navy (Installations and Environment) has the lead for oversight of Department of the Navy (DON) implementation of AFV programs.

5-5.3 Air Pollution Emergency Episodes. Where required, Navy shore facilities shall have an air pollution emergency episode contingency plan identifying all actions that can reasonably be taken without compromising essential services and mission responsibilities.

R) **5-5.4 Conformity.** The Navy issued draft interim guidance (CNO ltr Ser N457/4U596107 of 26 April 1994, (NOTAL)) for conducting conformity reviews which should be followed until final guidance is available.

R) **5-5.5 Penalty Assessments.** Navy activities should report all assessments of civil or administrative penalties by State or local air districts to the Regional Environmental Coordinator (REC) and refer them up through the claimant's chain of command and the Office of General Counsel chain of command to the Office of the Assistant General Counsel (Installations and Environment) (OAGC(I&E)) for guidance before paying any penalties.

R) **5-5.6 Emission Reduction Credits (ERCs).** ERCs shall be acquired and disposed of under references (d), (e), (f), (g), and (h) as if they were personal property.

a. For bases that are being closed or realigned under the Base Closure and Realignment Act of 1988 (Public Law 100-526) and the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510) process or any subsequent base closure law, ERCs shall be utilized and disposed of per DOD and DON policy.

b. For operating installations, ERCs will be utilized and disposed of in the following manner:

(1) ERCs generated from a change in operations, removal from service of equipment, or any other action that results in emissions reductions may be banked for:

(a) Future use by that same installation

(b) Transfer to another Navy installation within the same AQD or another AQD that will accept transfer of the credits

(c) Transfer to any DOD installation within the same AQD or another AQD that will accept transfer of the credits; or

(d) Transfer to any other Federal agency within the same AQD or another AQD that will accept transfer of the credits.

(2) ERCs may be transferred between military services under 10 U.S.C. Section 2571, with or without compensation.

(3) ERCs determined to be surplus to the Federal government shall be reported for screening and disposal using the existing personal property disposal mechanisms.

Installations requiring ERCs shall either:

(a) Purchase ERCs from other sources; or

(b) Obtain offsets from on-installation sources.

No ERCs may be disposed of or traded to non-Navy facilities unless such action has been coordinated with the appropriate REC.

5-5.6 Airborne Radionuclide Emissions. (R
Reference (a) regulates airborne radionuclide emissions into the environment. Within the Navy, the Naval Nuclear Propulsion Program Directorate is responsible for all aspects of compliance with Subpart I pertaining to nuclear propulsion. The Navy Radiation Safety Committee is responsible for compliance with Subpart I with respect to airborne radionuclide emissions from all other Navy sources under reference (a), Part 61. (D

5-6 Responsibilities

5-6.1 Deputy Chief of Naval Operations (Logistics) or designee shall: (R

a. *Coordinate the overall implementation of* CAA requirements.

b. Coordinate the review of proposed and final CAA regulations.

c. Issue policy and guidance as needed.

d. Coordinate the review of fines and penalties with OAGC(I&E).

5-6.2 Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) shall:

a. Revise technical documents and manuals to reflect design, operation, monitoring, and testing parameters required by emission and performance standards and permit requirements for shore facilities.

b. Provide technical assistance to shore commands, as requested, to:

(1) Determine permit and variance requirements, obtain data, and complete applications.

(2) Determine and implement requirements for mobile source controls.

c. Develop and provide to activity commanding officers required air applications/permits for preconstruction review/construction of Military Construction (MILCON)-funded air projects and pay related fees from the funds appropriated and budgeted for the projects. Such projects include initial source testing for startup of facilities and initial operating permits.

d. Maintain Navy-wide information on location and physical characteristics of Navy stationary sources, including key features of variances and delay compliance orders (DCOs).

e. Identify compliance requirements for new construction by coordination of all new projects or modifications with appropriate State/local and/or EPA regional offices and the affected facility.

f. Identify appropriate emission offsets, where required for new construction, and prepare and coordinate projects to implement offset requirements.

(D

g. Provide Navy-wide coordination and technical support for compliance with the CAA Title II requirements applicable to the Navy's vehicle fleets. (A

h. Assist Navy vehicle fleets in I/M testing.

5-6.3 Major claimants and subordinate commands shall:

a. Ensure that activities under their command comply with current Federal, State, interstate, and local air pollution control requirements.

b. Include requests for resources to meet air pollution control requirements in Program Objectives Memorandum (POM)/budget submissions.

5-6.4 Regional Environmental Coordinators shall:

a. Coordinate input and comments on all applicable CAA requirements in their area of responsibility. (R

b. Coordinate ERC trading among Navy facilities.

c. Notify CNO (N45) of any significant or precedent-setting State or local regulatory actions with the potential to impact Navy operations.

d. Perform the functions of Navy air pollution episode coordinator within air quality control regions, or portions thereof, under their jurisdiction. Air pollution episode coordinators

shall ensure that air episode plans and actions are consistent in degree and timing for all Navy activities in the affected episode area and are also as consistent as possible with plans and actions of other Federal activities and State and local air pollution control authorities.

5-6.5 Commanding Officers of shore activities shall:

a. Identify and submit environmental compliance projects, per Chapter 1, required to bring air sources into compliance.

b. Assure CAA general conformity rule requirements are satisfied for all Navy actions on the installation.

c. Sign all permits and compliance statements for operations conducted on the installation unless multi-installation permits are to be signed by a higher authority. Develop specific host/tenant agreements to ensure tenants will comply with all CAA requirements.

d. Sign applications for permits related to demolition, preconstruction, and construction phases of projects unless multi-installation permit applications are to be signed by a higher authority. Develop applications and pay related fees for non-MILCON projects. Similarly, sign applications and pay related fees associated with operating permits and variances to temporarily operate sources out of compliance with emission limitations.

e. Budget sufficient resources to maintain and demonstrate compliance, including all routine air monitoring and scheduled sampling or testing.

f. Notify State and local authorities, to conform with permit requirements, of all instances of noncompliance.

g. Survey emission sources to identify potential reductions.

h. Report potential ERC sources to the REC.

i. Submit, via the chain of command, to CNO (N45) all instances in which compliance with fuel standards is impractical.

j. Maintain current records of physical, operational, and emission characteristics of air sources, including the potential to emit and actual emissions of sources as required by applicable Federal, state and local regulations. (R

k. Ensure the development of air episode plans as required, and provide copies of plans to the REC.

l. Cooperate with the Navy air pollution episode coordinator, EPA, and State and local air pollution control authorities in the execution of air episode plans while in episode areas.

m. Ensure that motor vehicles and other mobile sources comply with applicable emission standards and other requirements.

n. Develop and implement transportation control measures as required by the SIP.

o. Where applicable, furnish to the appropriate regulatory authority proof of compliance with all State and local motor vehicle I/M requirements for all vehicles operated on the installation.

p. Implement and maintain proper adjustments in stationary heating and power plant operations, including those owned/operated by public work centers (PWCs), to reduce total emissions. Substantial fuel savings can also result from proper combustion operations and combustion air monitoring.

q. Ensure personnel are properly trained as required by the CAA.

CHAPTER 6

MANAGEMENT OF OZONE DEPLETING SUBSTANCES

6-1 Scope

This chapter implements Department of Defense (DOD) and Secretary of the Navy (SECNAV) policy concerning the management of ozone depleting substances (ODSs); incorporates the necessary changes to the U.S. Navy ODS Program under the requirements of the Clean Air Act Amendments of 1990, the accelerated production phase-out schedules for Class I ODSs (1 January 1994 for Halons, 31 December 1995 for all other Class I ODSs), and Executive Order (E.O.) 12843 of April 21, 1993 regarding acquisition and ODSs; and details specific restrictions and uses of ODSs within the Navy. OPNAVINST 5090.2A, "Management of Ozone Depleting Substances," dated 14 July 1994, was canceled.

The requirements of this chapter apply to all Navy ships, aircraft, shore activities (including non-appropriated fund activities), and government-owned/contractor-operated (GOCO) facilities worldwide except as follows:

a. **Naval Nuclear Propulsion Program.** E.O. 12344 and Public Law (P.L.) 98-525 (42 U.S.C. 7158, note) establish the responsibilities and authorities of the Director of Naval Nuclear Propulsion Program (CNO (N00N)) in the Office of the Chief of Naval Operations (CNO) (who is also Deputy Commander Nuclear Propulsion Directorate (SEA 08) in the Naval Sea Systems Command) over all facilities and activities that comprise the Program, a joint Department of Energy (DOE)/Navy organization. These responsibilities and authorities include all technical and logistical matters related to naval nuclear propulsion. Nothing in this policy supersedes or changes these responsibilities and authorities. Accordingly, the provisions of this policy do not apply to facilities and activities covered under E.O. 12344 and Pub.L. No. 98-525.

b. **Medical Devices.** This policy does not apply to essential uses of ODSs for medical devices as defined in the Clean Air Act (CAA) section 601(8) and approved for use as specified in CAA section 604(d)(2) and section 605(d)(1) by the Commissioner of the Food and Drug Administration and the Administrator of the Environmental Protection Agency (EPA) for Class I and Class II ODSs.

c. **Small Appliances.** This policy does not apply to small appliances, defined as appliances that do not normally require routine maintenance of the sealed refrigerant system and contain a refrigerant charge of 5 pounds or less. Examples include refrigerators and freezers designed for home use, dehumidifiers, room air conditioners (including window air conditioners), ice makers, vending machines and water coolers at shore activities and installed in surface ships and submarines.

d. **Laboratory and Analytical Uses.** This policy does not apply to essential uses of ODSs in very small quantities for laboratory purposes. As defined in the Technology and Economic Assessment Panel Report of the Montreal Protocol of March 1994 (NOTAL), laboratory purposes include: equipment calibration; use as extraction solvents, diluting agents, or carriers for specific chemical analysis; biochemical research; inert solvents for chemical reactions; and other critical purposes in research and development where substitutes are not readily available or where standards set by national and international agencies require specific use of ODSs.

e. **Base Realignment and Closure (BRAC) Activities.** Section 6-5.9.3 does not apply to BRAC facilities scheduled for closure. Section 6-5.13.1 does not apply to Class I ODSs to be transferred per BRAC procedures.

6-1.1 References. Relevant references are:

a. 40 CFR Part 82, EPA Regulations on the Protection of Stratospheric Ozone;

b. SECNAVINST 5090.5 Management and Elimination of Ozone Depleting Substances; (NOTAL);

c. SECNAV memorandum of 28 May 1993: "Elimination of Class I Ozone Depleting Substances in Department of the Navy Contracts;" (NOTAL);

d. Navy Acquisition Procedures Supplement to the Defense Federal Acquisition Regulation Supplement (DFARS) Subpart 5210.002-71 and Notice 5252.210-9000;

A) e. CNO ltr Ser N451I/7U530491 of 24 Dec 1997 Subj: POLICY ON CONVERSION OF HALON 1301 SYSTEMS

A) f. Navy ODS Advisory 96-01

g. BUMEDINST 6270.8, Procedures for Obtaining Health Hazard Assessments Pertaining to Operational Use of Hazardous Materials; (NOTAL);

h. OPNAVINST 5100.23E, Navy Occupational Safety and Health (NAVOSH) Program Manual; (NOTAL);

6-2 Legislation

6-2.1 Clean Air Act (CAA), as amended. In November of 1990, the United States Congress passed implementing national legislation for stratospheric ozone protection as Title VI of the 1990 Clean Air Act Amendments.

6-2.2 Montreal Protocol on Substances that Deplete the Ozone Layer. The presence of chlorofluorocarbons (CFCs), halons, other chlorinated hydrocarbons (carbon tetrachloride, methyl chloroform), hydrochlorofluorocarbons (HCFCs), etc., in the stratosphere is linked to the depletion of the earth's ozone layer that protects life and vegetation from damaging ultraviolet light. These materials are collectively referred to as ODSs. In response to the threat ODSs present to the environment, more than 125 nations, including the United States, have signed an international agreement, known as the Montreal Protocol, limiting ODS production. In 1990, due to increasing evidence of continued harm to the ozone layer, the Protocol was amended to provide for the eventual elimination of most ODSs. In November 1992, in a meeting in Copenhagen, parties to the Montreal Protocol agreed to accelerate the production phase-out schedules of CFCs to 31 December 1995 and halons to 1 January 1994.

6-2.3 DOD Authorization Act of 1993 (Pub.L. 102-484). The DOD authorization of funds for 1993 that restricts the purchase of Class I ODSs. The law requires that no class I ODS contracts can be issued without a Technical Certification provided by an authorized technical representative (ATR) and the approval of a senior acquisition official (SAO).

6-3 Terms and Definitions

6-3.1 Mission Critical Application. Uses of ODSs as determined by CNO and defined in paragraph 6-5.7.1.

6-3.2 Ozone Depleting Substances (ODSs). Any chemical listed as a Class I or Class II substance as defined by the CAA. Tables 6.1 and 6.2 list Class I and Class II ODSs. Class I ODSs most prevalent in Navy applications include CFC-11, CFC-12, CFC-113, CFC-114, Halon 1211, Halon 1301, methyl chloroform (1,1,1 trichloroethane), and carbon tetrachloride. Class II ODSs most prevalent in Navy applications include HCFC-22,

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CLASS I CHEMICAL AGENTS		ODP[1]
Group I (CFC - chlorofluorocarbon)		
CFC-11	Trichlorofluoromethane	1.0
CFC-12	Dichlorodifluoromethane	1.0
CFC-113	Trichlorotrifluoroethane	0.8
CFC-114	Dichlorotetrafluoroethane	1.0
CFC-115	Monochloropentafluoroethane	0.6
CFC-500[2]	Dichlorodifluoromethane-difluoroethane	0.738
CFC-502[3]	Monochlorodifluoromethane-monochloropentafluoroethane	0.307
Group II		
Halon-1211	Bromochlorodifluoromethane	3.0
Halon-1301	Bromotrifluoromethane	10.0
Halon-2402	Dibromotetrafluoroethane	6.0
Group III (CFC - chlorofluorocarbon)		
CFC-13	Chlorotrifluoromethane	1.0
CFC-111	Pentachlorofluoroethane	1.0
CFC-112	Tetrachlorodifluoroethane	1.0
CFC-211	Heptachlorofluoropropane	1.0
CFC-212	Hexachlorodifluoropropane	1.0
CFC-213	Pentachlorotrifluoropropane	1.0
CFC-214	Tetrachlorotetrafluoropropane	1.0
CFC-215	Trichloropentafluoropropane	1.0
CFC-216	Dichlorohexafluoropropane	1.0
CFC-217	Monochloroheptafluoropropane	1.0
CFC-503[4]	Trifluoromethane-trichlorotrifluoroethane	0.599
Group IV		
Carbon Tetrachloride	Tetrachloromethane	1.1
Group V		
Methyl Chloroform	1,1,1-Trichloroethane	0.1
Group VI		
Methyl Bromide	Bromomethane	0.7

Table 6.1

CLASS I CHEMICAL AGENTS	ODP[1]
Group VII	
$CHFBr_2$	1.0
CHF_2Br (HBFC-22B1)	0.74
CH_2FBr	0.73
C_2HFBr_4	0.3-0.8
$C_2HF_2Br_3$	0.5-1.8
$C_2HF_3Br_2$	0.4-1.6
C_2HF_4Br	0.7-1.2
$C_2H_2FBr_3$	0.1-1.1
$C_2H_2F_2Br_2$	0.2-1.5
$C_2H_2F_3Br$	0.7-1.6
$C_2H_3FBr_2$	0.1-1.7
$C_2H_3F_2Br$	0.2-1.1
C_2H_4FBr	0.07-0.1
C_3HFBr_6	0.3-1.5
$C_3HF_2Br_5$	0.2-1.9
$C_3HF_3Br_4$	0.3-1.8
$C_3HF_4Br_3$	0.5-2.2
$C_3HF_5Br_2$	0.9-2.0
C_3HF_6Br	0.7-3.3
$C_3H_2FBr_5$	0.1-1.9
$C_3H_2F_2Br_4$	0.2-2.1
$C_3H_2F_3Br_3$	0.2-5.6
$C_3H_2F_4Br_2$	0.3-7.5
$C_3H_2F_5Br$	0.9-1.4
$C_3H_3FBr_4$	0.08-1.9
$C_3H_3F_2Br_3$	0.1-3.1
$C_3H_3F_3Br_2$	0.1-2.5
$C_3H_3F_4Br$	0.3-4.4
$C_3H_4FBr_3$	0.03-0.3
$C_3H_4F_2Br_2$	0.1-1.0
$C_3H_4F_3Br$	0.07-0.8
$C_3H_5FBr_2$	0.04-0.4
$C_3H_5F_2Br$	0.07-0.8
C_3H_6FB	0.02-0.7

NOTE:
1. Ozone Depletion Potential as stated in Section 602 of the CAA.
2. Azeotropic mixture of CFC-12 and Hydrofluorocarbon (HFC) 152a.
3. Azeotropic mixture of CFC-115 and HFC-22.
4. Azeotropic mixture of CFC-113 and HFC-23.

Table 6.1 Continued

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CLASS II CHEMICAL AGENTS (HCFC - hydrochlorofluorocarbon)		ODP[1]
HCFC-21	Dichlorofluoromethane	
HCFC-22	Monochlorodifluoromethane	0.05
HCFC-31	Monochlorofluoromethane	
HCFC-121	Tetrachlorofluoroethane	
HCFC-122	Trichlorodifluoroethane	
HCFC-123	Dichlorotrifluoroethane	0.02
HCFC-124	Monochlorotetrafluoroethane	0.02
HCFC-131	Trichlorofluoroethane	
HCFC-132	Dichlorodifluoroethane	
HCFC-133	Monochlorotrifluoroethane	
HCFC-141(b)	Dichlorofluoroethane	0.1
HCFC-142(b)	Monochlorodifluoroethane	0.06
HCFC-221	Hexachlorofluoropropane	
HCFC-222	Pentachlorodifluoropropane	
HCFC-223	Tetrachlorotrifluoropropane	
HCFC-224	Trichlorotetrafluoropropane	
HCFC-225	Dichloropentafluoropropane	
HCFC-226	Monochlorohexafluoropropane	
HCFC-231	Pentachlorofluoropropane	
HCFC-232	Tetrachlorodifluoropropane	
HCFC-233	Trichlorotrifluoropropane	
HCFC-234	Dichlorotetrafluoropropane	
HCFC-235	Monochloropentafluoropropane	
HCFC-241	Tetrachlorofluoropropane	
HCFC-242	Trichlorodifluoropropane	
HCFC-243	Dichlorotrifluoropropane	
HCFC-244	Monochlorotetrafluoropropane	
HCFC-251	Trichlorofluoropropane	
HCFC-252	Dichlorodifluoropropane	
HCFC-253	Monochlorotrifluoropropane	
HCFC-261	Dichlorofluoropropane	
HCFC-262	Monochlorodifluoropropane	
HCFC-271	Monochlorofluoropropane	

NOTE:
1. Ozone Depletion Potential as stated in Section 602 of the CAA.

Table 6.2

HCFC-123, and HCFC-141b. CFCs and HCFCs are commonly referred to as Freons.

6-3.3 ODS Reserve. Supply of selected Class I ODSs to support mission critical applications as defined in paragraph 6-5.7.1. The DOD ODS Reserve is located at Defense Supply Center, Richmond, Virginia (DSC,R)

6-3.4 Reclaiming. The process of returning a used or contaminated ODS to near original specifications, by means which may include distillation. A reclaimer must perform chemical analysis of the ODS to determine that the appropriate product specifications are met.

6-3.5 Recovery. The removal and containment (or capture) of any ODS in any condition from a system without testing or processing.

6-3.6 Recycling. The reduction of contaminants in a used ODS by oil separation and single or multiple passes through devices that reduce moisture, acidity, and particulate matter.

6-4 Requirements

6-4.1 General. The following legislative requirements apply to shore facilities. Refer to chapter 19 for shipboard requirements.

a. Production of CFCs, carbon tetrachloride, methyl chloroform was prohibited as of 31 December 1995; production of halons was prohibited as of 1 January 1994.

b. Only technicians trained and certified per the requirements of reference (a) who use approved recovery and recycling equipment may repair or service motor vehicle air conditioners.

c. Only technicians trained and certified per the requirements of reference (a) who use approved recovery and recycling equipment may repair, service, maintain or dispose of appliances and industrial process refrigeration and air conditioning.

d. Only technicians trained regarding halon emissions reduction as specified by reference (a) may test, maintain, service, repair or dispose of halon-containing equipment. (A

e. It is unlawful to knowingly release any Class I or Class II ODS refrigerant or halon into the atmosphere during the service, repair, or disposal of appliances, industrial process refrigeration and air conditioning equipment and halon-containing equipment.

f. Activities must reduce the use and emissions of ODSs to the lowest achievable level.

g. Activities must meet labeling requirements for ODSs.

h. Owners or operators of appliances normally containing more than 50 pounds of refrigerant must monitor leakage rates and repair leaks as specified by reference (a). This requirement does not apply to military unique equipment as defined in reference (a) and chapter 19.

i. Owners/operators of air conditioning and refrigeration equipment, owners of recovery and recycling equipment, disposers, technician certification programs, equipment certification programs, wholesalers, and reclaimers must meet recordkeeping requirements as specified in reference (a).

6-5 Navy Policy

6-5.1 General. In recent years, the Navy has been involved in research and development of alternative substances and systems, and recovery and recycling equipment that decrease the Navy's dependence on ODSs. Due to the large quantities of ODSs used and the numerous applications of these ODSs, Navy personnel should carefully evaluate each situation to determine the proper

course of action needed to phase out ODS usage. In all military applications, such as fire protection and shipboard chilled water air conditioning and refrigeration systems, it is essential to recycle, conserve, and properly manage these ODSs to ensure adequate availability of ODSs until suitable alternatives can be tested, qualified, and implemented. It is important that the Navy continue to reduce the use of ODSs and eliminate emissions for compliance with the requirements of the CAA.

To satisfy these objectives, this chapter provides policy on ODS procurement, recovery, use, recycling, material management, emission, substitution, and research, development, testing and evaluation.

6-5.2 Acquisition. Acquisition of ODSs shall be per the DOD Authorization Act of 1993; E.O. 12843 of April 21, 1993; reference (b); reference (c); reference (d); all implementing procurement regulations; and the requirements of this instruction. Class I ODSs for mission critical applications shall be procured from the ODS Reserve per section 6-5.8 and not by contracting action.

6-5.3 ODS Inventory Reporting. Activities shall submit ODS inventory data to claimants on an annual basis. The report should provide information as of 1 January of the calendar year in which it is submitted. Claimants shall validate the data and submit a consolidated annual report for their activities to CNO (N45) no later than 1 April for calendar years 1997-2001.

Appendix O provides detailed descriptions and formats for data call responses. CNO (N45) will use the data to validate funding requirements and measure Navy progress in eliminating use of ODSs.

6-5.4 Procurement of Recycled or Reclaimed ODSs. If ODS procurement is necessary, Navy activities shall procure recycled or reclaimed ODSs whenever possible.

6-5.5 Conservation Practices. Activities shall implement conservation practices to the extent practical for all ODS applications, including performing regular system leak checks, improving supply management, and recycling and reclaiming Class I and Class II ODSs.

6-5.6 Review of Navy Practices. Activities shall review and modify all operational, training and testing practices to reduce and eliminate emissions of ODSs to the maximum extent possible.

6-5.7 Mission Critical Applications. The use of Class I ODSs shall continue for mission critical applications so as to not jeopardize or degrade the safety or operational requirements of the Navy.

6-5.7.1 Navy mission critical applications are:

a. CFC-11, CFC-12, CFC-114, and CFC-500 used in ship chilled water air conditioning, ships stores and cargo refrigeration, and aircraft environmental control systems. CFCs used in shore-based training applications where weapon system equipment is stationed at a shore facility responsible for training of personnel in the handling, operation, and maintenance of that equipment.

b. Halon 1211 used in flight line fire protection and ship and shore-based crash, fire, and rescue vehicles. Limited use of Halon 1211 for landing craft, air cushion (LCAC).

c. Halon 1301 used in shipboard room flooding applications and aircraft explosion suppression and fire protection.

d. CFC-113 used in support of oxygen system cleaning and gyroscope cleaning applications.

e. Shore-based heating, ventilation, air conditioning and refrigeration (HVAC&R)

equipment and fire protection systems as approved by CNO (N45).

Activities shall continue to use ODSs for mission critical applications until such time as the cognizant System Command develops and approves, and Echelon 2 Commands implement the use of safe alternative substances or systems. Navy Advisory 95-01 provides additional guidance.

6-5.8 Use of ODS Reserve

6-5.8.1 General. CNO (N45) shall control access to the ODS Reserve. The ODS Reserve shall be used only to support mission critical applications as described in paragraph 6-5.7 when no alternative is available or when interim support is required during retrofit or implementation of alternatives. Requisition of ODS Reserve material for non-mission critical applications is not authorized. CNO (N45) shall control access to the Reserve with an authorized users' list. Defense Logistics Agency (DLA) established procedures for deposits to and requisitions from the Reserve. Navy distributes these procedures in reference (f). CNO (N45), Commander, Naval Sea Systems Command (COMNAVSEASYSCOM), Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) and Commander, Military Sealift Command (COMSC) shall monitor requisitions. Activities shall submit requests for waivers to this policy to CNO (N45) via the chain of command as described in paragraph 6-5.14.

6-5.8.2 Activities shall not requisition ODSs from the Reserve for non-mission critical applications such as shore-based HVAC&R equipment, or shore-based fire protection systems except as approved by CNO (N45) in paragraph 6-5.14.

6-5.9 Non-mission Critical Applications

6-5.9.1 New Equipment. All shore-based, non-mission critical HVAC&R equipment for which procurement was initiated after 14 July 1994 shall use an EPA Significant New Alternatives Policy (SNAP) Program-approved refrigerant with an ozone depletion potential (ODP) of 0.05 or less and an ODP of zero when possible. HVAC&R equipment using SNAP Program-approved refrigerants with ODP values of 0.05 or less, but greater than zero, are allowed when the use of refrigerants with ODP of zero prevents compliance with the energy efficiency requirements of 10 CFR 435.108 and E.O. 12902 for the procurement of HVAC&R equipment, results in higher life cycle cost, or does not meet other performance criteria (size, reliability/maintenance, logistics, etc.) New HVAC&R equipment (both mission critical and non-mission critical) may not contain Class II substances if the expected life cycle of the equipment extends 5 years beyond the production phaseout date of the specific Class II substance used. (For example: activities may not procure new HCFC-22 equipment with life cycles extending beyond 2025.) Installation of shore-based Halon 1301 fire protection systems and procurement of non-mission critical portable halon fire extinguishers is prohibited. (R

6-5.9.2 Acquisition. Per the DOD Authorization Act of 1993, no Class I ODS contracts may be issued without a Technical Certification and the approval of a SAO.

a. The cognizant command shall designate an authorized technical representative who will conduct a technical review and certify that there are no suitable substitutes available.

b. A flag officer or member of the Senior Executive Service (SES) designated by the requiring command to be the SAO for the procurement shall approve the contract following the Technical Certification. The SAO is the person who actually authorizes the purchase and should be in the chain of command of the activity that owns the equipment or facility requiring the use

of a Class I ODS. Upon signing the approval, the SAO shall report the procurement to the Assistant Secretary of the Navy, (Research, Development and Acquisition) (ASN (RD&A)) through the appropriate Echelon 2 Command.

R) **6-5.9.3 ODS Conversion Plan.** CNO (N45) has issued revised guidance that eliminates the deadline for removal of shore facility Halon 1301 systems, formerly contained in this instruction. Unless waived by CNO, OPNAVINST 5090.1B previously required the removal of Halon 1301 systems at Navy shore facilities no later than 31 December 2000. The new policy, contained in reference (e), states:

"The Navy ODS program is focused on making decisions that ensure operational readiness and minimize environmental impacts during the production phase-outs of Ozone-Depleting Substances (ODS). Halon 1301 in non-mission critical, shore-based installed systems is not released to the atmosphere unless there is a catastrophic failure or a fire."

Since removal of installed systems can sometimes lead to the unintentional and unnecessary release of Halon to the atmosphere, in some cases it may be desirable to leave an installed Halon system in place. However, should a discharge occur as a result of a fire or accident, in no case will the system be refilled with Halon 1301.

Many facility spaces that are currently protected with Halon 1301 can be adequately protected with existing water sprinkler systems. If an accidental discharge or fire should occur in this situation, there will be no need to replace the Halon 1301 in the system or to replace the system with an alternative agent.

Some facility spaces currently protected by Halon 1301 cannot be adequately protected with water sprinkler systems alone. If an accidental discharge or fire should occur in one of these spaces, the system should not be refilled with Halon 1301. It should be retrofitted or replaced with an alternative agent.

Facilities with existing systems that are discharged in the event of a fire or accidentally shall follow guidelines in the NAVFAC ODS Conversion Guide to determine if water sprinklers provide adequate protection or if retrofit with an alternative agent is required.

All excess Halon should continue to be recovered and returned to the DOD ODS Reserve in accordance with OPNAVINST 5090.1B and using procedures contained in reference (f).

ODS conversion plans shall be referred to or incorporated in facility pollution prevention plans as described in section 3-5.4. CNO (N45) will not fund execution of ODS conversion plans for Defense Working Capital Fund/Navy Working Capital Fund (DWCF/NWCF)-funded equipment. (R

Plans should contain at a minimum:

a. Inventory of Class I ODS equipment/applications.

b. Description of alternatives that will be implemented.

c. Schedule for conversion/replacement.

d. Estimated costs for plan implementation.

e. Plans for recovery/recycling/reuse of existing stocks of ODSs to support shore-based equipment during plan execution.

f. Plans for leak monitoring.

g. Plan for supporting training requirements.

6-5.9.4 Shore-based HVAC&R Equipment

6-5.9.4.1 Applicability. The requirements of paragraph 6-5.9.3 apply to HVAC&R equipment in the following categories:

a. Refrigeration equipment with more than 5 pounds of refrigerant installed (i.e., all refrigeration equipment that is not a small, hermetically sealed appliance).

b. Air conditioning equipment with more than 5 tons cooling capacity (60,000 BTU).

The requirements of paragraph 6-5.9.3 do not apply to motor vehicle air conditioners.

6-5.9.4.2 Recovered Refrigerant. Activities shall recover, recycle, and reuse serviceable refrigerant from replacements and conversions. Refrigerant recovered and recycled may be stored and used locally in order to service existing Class I ODS AC&R equipment. Activities shall manage this supply and deposit it in the Navy portion of the ODS Reserve per paragraph 6-5.8.1 when it is no longer needed to support local applications.

6-5.9.5 Shore-Based Halon 1301 Systems

6-5.9.5.1 General. The requirements of paragraph 6-5.9.3 apply to all non-mission critical installed Halon 1301 systems.

6-5.9.5.2 Recovered Halon 1301. Activities shall recover and deposit excess Halon 1301 in the Navy portion of the ODS Reserve per paragraph 6-5.8.1.

6-5.9.6 Portable Halon Fire Extinguishers. As of 1 January 1996, activities were required to remove and locally redistribute all non-mission critical halon portable fire extinguishers to support mission critical requirements or turn them in to the Navy portion of the ODS Reserve per paragraph 6-5.8.1.

6-5.9.7 ODS Solvents. Class I ODS solvents were phased out of production on 31 December 1995. Existing supplies are limited. If an activity identifies a Class I ODS solvent application for which it does not know of an alternative, the activity shall consult with the cognizant engineering authority. If no alternative has been identified, the activity shall forward this information via the chain of command to its cognizant Echelon 2 command. Mission critical solvent applications as described in paragraph 6-5.7.1 with no identified alternatives shall be supported by the ODS Reserve until alternatives are implemented. New supplies of material should not be procured.

6-5.9.7.1 Existing Supplies of ODS Solvents. Existing stocks of ODS solvents may be used to provide interim support during the transition to non-ODS alternatives. Activities shall turn in unopened containers of Class I ODS solvents that are not required for interim support to the ODS Reserve per paragraph 6-5.8.1.

6-5.9.8 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 units through attrition per paragraph 6-5.9.9 and NAVSEA catalog S6161-Q5-CAT-010. CNO (N45) authorized ships to use material from the ODS Reserve per paragraph 6-5.8.1 to support galley equipment until the year 2005. After that date, ships shall meet any remaining material requirements through local sources per paragraph 6-5.9.2.

6-5.9.9 Alternative Selection

6-5.9.9.1 Criteria. Navy activities shall select alternatives that are EPA SNAP-approved with an ODP of zero when possible, except as noted in paragraph 6-5.9.1. If no EPA SNAP-approved alternative with an ODP of zero exists, activities shall adopt alternatives with an ODP of 0.05 or less. Alternatives shall meet performance requirements and be commercially available.

6-5.9.9.2 Health and Safety issues. Activities shall contact their local industrial hygienist or occupational safety and health personnel to ensure proper identification of occupational safety and health hazards associated with ODS alternatives. Activities shall ensure recommended health and safety hazard control measures are properly in place prior to implementing alternatives. Reference (g) details specific procedures for obtaining health hazard assessments pertaining to operational use of hazardous materials.

D)

6-5.10 Refrigerants Handling

6-5.10.1 Maintenance. Navy personnel, in the course of maintaining, servicing, repairing, or disposing of any equipment (including small appliances) or systems containing Class I or Class II ODSs, shall not knowingly vent or otherwise knowingly release any ODS in a manner which permits the substance to enter the environment. These restrictions do not apply to *de minimis* releases associated with good faith attempts to recapture and recycle or safely dispose of Class I and Class II ODSs.

6-5.10.2 Refrigerant Recovery

a. Activities shall use EPA-approved refrigerant recovery equipment for all commercial off-the-shelf equipment. For military-unique systems, recovery equipment shall be designed, to the extent practical, to achieve performance comparable to that required of commercial equipment by the EPA. In shipboard operations, personnel shall recover ODSs prior to performing maintenance on air conditioning and refrigeratio R) tems per paragraph 19-4.2.2.f.

b. New and converted HVAC&R equipment shall include refrigerant isolation valves and service apertures to facilitate recovery and recycling procedures per CAA rulemaking requirements.

c. Per reference (a), activities owning recycling and recovery equipment shall certify to the appropriate EPA regional office that they have acquired such equipment and that they are complying with CAA section 608 requirements.

6-5.10.3 Refrigerant Technician Certification. All Navy military and civilian refrigerant technicians shall be certified per reference (a). Training priority should be granted to technicians servicing equipment within the U.S., then to technicians overseas. Technicians may require additional State or local certifications if they are more stringent than Federal certification. Technician certification requirements do not apply to foreign nationals working on U.S. Navy equipment overseas.

6-5.10.4 Motor Vehicle Technician Certification. All Navy military and civilian motor vehicle technicians performing service and repair on motor vehicle air conditioners shall be certified as specified by reference (a). Certification requirements do not apply to foreign nationals working on U.S. Navy vehicles overseas.

6-5.10.5 Refrigerants as Hazardous Material. ODS refrigerants are considered hazardous material (HM) and are subject to the requirements of this chapter as well as to the CAA and reference (h). However, used Class I and Class II ODS refrigerants that are recycled for future use are not considered hazardous waste under Federal laws. Where they are more restrictive, however, State and local ODS regulations apply.

6-5.11 Intentional Releases of Halon. Navy personnel shall not intentionally release halon during the service, maintenance, repair, or disposal of any firefighting equipment. Technicians who test, maintain, service, repair or dispose of halon-containing equipment shall be trained regarding halon emissions reduction as specified by reference (a).

6-5.12 Emerging Technology/Alternatives. Navy activities having any information regarding new emerging technologies and alternatives for the elimination of ODSs should contact their claimant or COMNAVSEASYSCOM for incorporation into the Navy CFC/Halon Clearinghouse. In addition, activities may request information on ODS alternatives by contacting the clearinghouse through COMNAVSEASYSCOM.

6-5.13 Disposal of ODSs

6-5.13.1 Sale of ODSs. No Navy activity shall sell or otherwise transfer any Class I ODS outside the Navy without written permission from the CNO (N4). Contract specifications and contractual actions shall not include the transfer of Class I ODSs to contractors. Activities shall deposit excess Class I ODSs into the Navy portion of the DOD ODS Reserve per paragraph 6-5.8.1.

6-5.13.2 Turn-in of Equipment to Defense Reutilization and Marketing Service (DRMS). Activities transferring HVAC&R equipment to DRMS for reuse shall label the equipment to indicate that it contains an ODS. Activities transferring HVAC&R equipment to DRMS for disposal as scrap shall recover the ODS prior to disposal. Activities are not required to recover ODSs from HVAC&R equipment classified as small appliances by paragraph 6-1c prior to transfer of equipment to DRMS for reuse or disposal.

6-5.14 Waivers. Requests for waivers to the provisions of this chapter shall be submitted to CNO (N45) via the chain of command. For such waivers, an activity must demonstrate that the application of the requirements of this chapter is impractical or results in the expenditure of resources that are not commensurate with the resultant reduction in the potential for unintentional release of ODSs to the environment. Statutory requirements shall not be waived.

6-5.14.1 Content. At a minimum, waiver requests should contain the following:

a. ODS involved

b. Number of units affected

c. Quantity of ODS involved

d. Associated costs

e. Statement of environmental impact (i.e., annual leakage, average annual discharge of material, etc.)

f. Safety and occupational health impact

g. Operational impact

h. Plan for meeting requirement

i. Additional information as appropriate.

6-5.14.2 Review and Approval Process. CNO (N45) will review waivers on a case-by-case basis and provide responses by letter via the chain of command. All approved waivers will be granted for a finite time period.

6-6 Responsibilities

6-6.1 The Chief of Naval Operations (CNO N45) shall: (R

a. Annually review, in conjunction with the Directors of Warfare Divisions (CNO (N85, N86, N87 N88)) and Director of Test & Evaluation and Technology Requirements (CNO (N091)), the adequacy of ODS programs and resources.

b. Review all requests for waivers to the requirements of this chapter and forward recommendations to the Assistant Secretary of the Navy (Installations & Environment) (ASN (I&E)).

c. Review and approve requests for additions, deletions, or changes to the authorized users list for the ODS Reserve.

d. Compile claimant data on ODS Reserve requirements and identify any shortfalls.

e. Review annual ODS inventory data submitted by claimants.

f. Coordinate activities of Echelon 2 commands to ensure an orderly transition from ODSs to suitable alternatives.

6-6.2 All major claimants and subordinate commands shall:

a. Implement the policies and procedures of this chapter and ensure their activities correctly follow the annual reporting requirements outlined in this chapter. Annually submit ODS inventory data for their activities no later than 1 April.

b. Identify funding in their Program Objectives Memorandum (POM) process for elimination, recycling, and substitution of ODSs. Coordinate research and development (R&D) requirements with CNO (N45) to avoid redundant efforts. Coordinate all funding requirements with CNO (N45) and forward directly to the appropriate resource sponsor. Funding requirements shall include funds necessary for activities to meet all ODS-related requirements as described in Baseline Assessment Memorandum (BAM) Cookbook categories.

c. Ensure activities execute funds to meet deadlines for elimination of ODS equipment as described in section 6-5.9.

d. Revise preventive and corrective maintenance procedures, for which they are the cognizant activity, to incorporate the use of ODS recovery and recycling units.

e. Revise military specifications and manuals, for which they are the cognizant activity, to reduce or eliminate references to the use of ODSs.

f. Participate in ODS consortiums, conferences, and technology transfer to ensure the Navy's interests are identified and satisfied.

g. Submit an annual report by letter to CNO (N45) no later than 1 January on the status of elimination of ODSs in specifications and standards for which the Echelon 2 command is the cognizant authority. The report shall include:

(1) The total number of specifications and standards containing ODSs for which they have cognizant authority since November 1994,

(2) The number of specifications and standards which reference an ODS that were revised to remove the reference to ODSs during this period,

(3) The total number of specifications and standards which reference an ODS that were revised to remove the reference to ODSs since November 1994, and

(4) Any impediments to removing ODSs from specifications or standards and actions taken to resolve impediments.

Echelon 2 commands not holding cognizant authority over any specifications or standards shall submit a one-time negative report.

h. Review all requests from subordinate activities for waivers to the requirements of this chapter and forward recommendations to CNO (N45).

6-6.3 COMNAVSEASYSCOM shall:

a. Serve as the lead technical Echelon 2 command to ensure that all Navy-wide common interests and concerns are addressed.

b. Maintain the Navy CFC/Halon Clearinghouse for use by all Navy activities.

c. Manage the conversion of Navy shipboard HVAC&R systems.

d. Monitor the drawdown of the Navy's reserve of ODSs and, if the actual rate of drawdown varies from predicted rates, develop corrective actions, fully coordinate them with the appropriate Echelon 2 commands, and provide recommended corrective actions to CNO (N45).

e. Establish and maintain a single Navy ODS Advisory System that will provide consistent guidance to the Fleets and field activities.

f. In coordination with the Fleets, evaluate on an annual basis the ODS Reserve requirements for cognizant mission-critical applications of ODSs and submit any changes to CNO (N45).

g. Revise procurement guidance for shipboard galley equipment to include only equipment that meets the requirements of paragraph 6-5.9.9.

h. Ensure miscellaneous NAVSEASYSCOM-owned equipment and systems that use ODSs have material support plans or are converted or replaced to use non-ODS materials.

i. Ensure COMNAVSEASYSCOM field activities meet requirements for elimination of ODS equipment.

6-6.4 Commander, Naval Supply System Command (COMNAVSUPSYSCOM) shall

a. Serve as the Navy liaison with DLA on matters pertaining to the establishment, maintenance, operation, and funding, as appropriate, of the ODS Reserve.

b. Revise, as necessary, acquisition instructions and guidance to include additional ODSs as they are regulated by the EPA.

c. Assist Echelon 2 commands with the ODS recycling and reclamation program.

d. Incorporate refrigerant and halon recovery and recycling equipment and appropriate spare parts into the Navy supply system as soon as possible after contract award and notification by other Echelon 2 commands.

e. Provide monthly reports of ODS requisitions as compiled by Navy Inventory Control Point, Mechanicsburg (NAVICP-M) to COMNAVSEASYSCOM for incorporation into the ODS Reserve monitoring system.

6-6.5 Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) shall

a. Develop, and revise as necessary, guidance for shore activities on ODS alternatives for air conditioning and fire protection systems.

b. Develop a sample scope of work for analyzing shore-based HVAC&R equipment and providing recommendations to commanding officers on the most cost-effective manner of replacing, converting, or retrofitting existing HVAC&R systems.

c. Prepare plans for the replacement, conversion, or retrofitting of existing HVAC&R systems at shore activities as requested.

d. Provide technical support to activities in the development of ODS conversion plans.

6-6.6 Chief, Bureau of Medicine and Surgery (BUMED) shall provide workplace hazard evaluations and health risk assessments for ODS substitutes which are proposed for use in industrial operations and Navy-unique working environments, as requested by other Echelon 2 commands. Reference (g) provides guidance regarding procedures for requesting health hazard assessments.

6-6.7 Chief of Naval Education and Training (CNET) shall

a. Develop alternate training procedures using safe alternatives to ODSs where consistent with operational requirements without degradation of mission effectiveness.

b. Incorporate ODS issues into hazardous material control and management training as well as enlisted Class A and Class C schools and officer training courses, as appropriate.

c. Incorporate EPA-required training on the proper use of ODS recovery and recycling equipment into HVAC&R technician curriculums.

d. Ensure that training in the proper use of ODS recovery and recycling equipment is incorporated into the Environmental and Natural Resources Training System Plan.

e. Ensure all graduates of CNET courses that teach maintenance on systems containing ODSs are Federally certified per reference (a) as a condition for graduation.

6-6.8 COMNAVAIRSYSCOM shall:

a. Monitor the drawdown of the COMNAVAIRSYSCOM portion of the ODS Reserve and develop any required corrective actions in cooperation with CNO (N45), COMNAVSEASYSCOM, Commander Military Sealift Command (CMSC), and the Fleets.

b. In coordination with the Fleets, evaluate on an annual basis the ODS Reserve requirements for cognizant mission-critical applications of ODSs and submit any changes to CNO (N45).

c. Identify and address ODS program, technical, and supportability issues related to naval aviation and coordinate solutions with appropriate aircraft program managers, Echelon 2 commands and CNO (N45).

6-6.9 COMSC shall:

a. Monitor the drawdown of the MSC portion of the ODS Reserve and develop any required corrective actions in cooperation with CNO (N45), COMNAVSEASYSCOM, COMNAVAIRSYSCOM, and the Fleets.

b. In coordination with other Echelon 2 commands as appropriate, evaluate on an annual basis the ODS Reserve requirements for cognizant mission critical applications of ODSs and submit any changes to CNO (N45).

c. Identify and address ODS program, technical, and supportability issues related to COMSC operations and coordinate solutions with appropriate Echelon 2 commands and CNO (N45).

d. Revise procurement guidance for shipboard galley equipment to include only equipment that meets the requirements of paragraph 6-5.9.9.

e. Manage the conversion of shipboard HVAC&R systems on COMSC vessels.

f. Ensure miscellaneous MSC-managed equipment and systems that use ODSs have material support plans or are converted or replaced to use non-ODS materials.

6-6.10 Fleet Commanders in Chief (CINCs) shall:

a. Coordinate with COMNAVSEASYSCOM, COMNAVAIRSYSCOM, and COMSC, as appropriate, to manage equipment and weapon system conversion programs and schedules.

b. In coordination with CNO (N45), COMNAVSEASYSCOM, COMNAVAIRSYSCOM, and COMSC, monitor the drawdown of the ODS Reserve and develop any required corrective actions.

c. In coordination with COMNAVAIRSYSCOM, COMNAVSEASYSCOM, and COMSC, as appropriate, evaluate on an annual basis the ODS Reserve requirements for cognizant mission critical applications of ODSs.

d. Develop and execute plans to meet Navy performance goals for shipboard AC&R equipment leakage rates as described in paragraph 19-4.2.2.e.

e. Ensure Type Commanders manage existing funds to replace shipboard galley equipment as described in paragraph 6-5.9.8.

6-6.11 Commanding officers ashore and afloat shall:

a. Implement appropriate ODS procurement guidance as established by COMNAVSUPSYSCOM, COMNAVFACENGCOM, and other Echelon 2 commands. Establish requisition procedures to ensure ODS Reserve material is used only for prescribed mission critical applications.

b. Ensure that ODSs are included in the HM authorized use list.

c. Establish practices and procedures internally to reduce emissions of ODSs as much as possible.

d. Provide resources (tuition, travel, per diem, etc.) for training refrigerant and halon technicians on ODS emission reduction and recovery and recycling equipment and ensure compliance with applicable technician certification requirements. (R

e. Submit requests for waivers to any of the mandatory provisions of this policy via the chain of command to CNO (N45). Statutory requirements may not be waived.

6-6.11.1 Commanding officers ashore shall: (D

a. Annually submit ODS inventory data to claimants as described in paragraph 6-5.3.

b. Ensure ODS conversion plans were approved and submitted to claimants for review and funding in the POM cycle by 31 December 1996.

CHAPTER 7

CLEAN WATER ASHORE

7-1 Scope

7-1.1 This chapter identifies requirements and responsibilities for the control and prevention of surface water pollution, and ground water pollution related to Underground Injection Control (UIC) at Navy shore facilities within the United States, Commonwealth of Puerto Rico, Canal Zone, Virgin Islands, Commonwealth of the Northern Mariana Islands, Guam, America Samoa, and the Trust Territory of the Pacific Islands. Refer to Chapter 18 for information on Navy activities in foreign countries and Chapter 19 for information on ship discharges.

7-1.2 References. Relevant references are:

a. 33 USC § 1251 *et seq.* (40 CFR Parts 100-136, 140, 230-233, 401-471, and 501-503), Federal Water Pollution Control Act (known as the Clean Water Act (CWA));

b. E.O. 12088, Federal Compliance with Pollution Control Standards;

c. 40 CFR 130, Water Quality Planning and Management (TMDLs);

d. 40 CFR 122-123 (33 USC §402), National Pollutants Discharge Elimination System (NPDES) Program;

e. 40 CFR 403 & 405-471 (33 USC §301-303, and §307-309), Environmental Protection Agency (EPA) General Pretreatment Standards and Effluent Limits for Point Source Categories;

f. 40 CFR 122 (33 USC §402), Stormwater Discharges;

g. 42 USC §6901 *et seq.* (40 CFR Parts 240-282), Resource Conservation and Recovery Act;

h. 42 USC §6939e, Federal Facilities Compliance Act of 1992;

i. 40 CFR 501, State Sludge Management Program Regulations;

j. 40 CFR 230-231 (33 USC §403-404), Dredged or Fill Permits;

k. 33 USC 1329, Section 319 Nonpoint Source Management Program;

l. 16 USC §1451 *et seq.*, Coastal Zone Management Act of 1972.

7-2 Legislation

7-2.1 Coastal Zone Management Act (CZMA), 16 USC §1451 *et seq*. Administered by the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce, the CZMA provides grants to promote development and management programs whose goal is the achievement of wise use of the land and water resources of the coastal zone. State CZMA programs are to protect natural resources;

manage development in high hazard areas; manage development to achieve quality coastal waters; have orderly processes for the siting of major facilities; locate new commercial and industrial development in or adjacent to existing developed areas; provide public access for recreation; redevelop urban waterfronts and ports, and preserve and restore historic, cultural, and esthetic coastal features; simplify and expedite governmental decision-making actions; coordinate State and Federal actions; give adequate consideration to the views of Federal agencies; ensure that the public and local government have a say in coastal decision-making; and comprehensively plan for and manage living marine resources.

Under the CZMA, Federal actions that affect any land or water use or natural resource of the coastal zone must be consistent with the State program to the maximum extent practicable.

7-2.2 Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), 33 USC §1251 *et seq*. The purpose of the CWA (reference (a)) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. To accomplish these goals, each State is required to establish water quality standards for its surface waters based on designated uses. Under CWA Section 303(d), each State is to submit to EPA a list of surface waters that are not meeting their water quality standards. For these "impaired" waterbodies, each State is supposed to develop Total Maximum Daily Loads (TMDLs), which are the amount of pollutants that can be assimilated by a body of water without exceeding the water quality standards. Based on the developed TMDLs, the States or EPA would limit any discharge of pollutants to a level sufficient to ensure compliance with State water quality standards. Direct discharges of pollutants to the waters of the United States are regulated by National Pollutant Discharge Elimination System (NPDES) permits issued by EPA or under State NPDES programs approved by EPA. This includes discharges of storm water from municipal separate storm sewer systems, industrial areas, and construction sites greater than or equal to one acre. Nonpoint sources of pollution are to be managed through State or local controls. Indirect industrial discharges of effluent to publicly owned treatment works (POTWs) are subject to pretreatment standards promulgated by EPA.

The CWA prohibits spills, leaks or other discharges of oil or hazardous substances into waters of the United States in quantities that may be harmful, which includes discharges of oil that:

a. Violate applicable water quality standards; or

b. Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

The Oil Pollution Act of 1990 (OPA 90) amended the CWA to expand oil spill prevention activities, improve preparedness and response capabilities, and ensure that companies are responsible for damages from spills. The CWA also requires a permit for the discharge of dredged or fill materials into waters of the United States.

7-2.3 Marine Protection, Research and Sanctuaries Act (MPRSA) (Ocean Dumping Act), 33 USC §1401 *et seq*. The MPRSA requires the protection of contiguous zone waters from sewage sludge discharges and direct dumping, and through an ocean dumping permit program, provides procedures for the intentional disposal and/or abandonment of material into ocean waters.

7-2.4 Rivers and Harbors Act of 1899 (RHA), 33 USC §401 *et seq*. The RHA regulates the disposal of refuse and debris into the rivers and harbors of the U.S. and makes it illegal to create any obstruction to navigable waters without the approval of the Army Corps of Engineers (COE). EPA, COE, and States regulate dredge and fill operations and dredge/fill material disposal. EPA establishes criteria and guidelines to protect the nation's waters from contamination by dredged or fill material. The COE and some States

administer permit programs for dredge and fill operations in waterways and wetlands, and for construction activities in navigable waters.

7-2.5 Safe Drinking Water Act (SDWA), 42 USC §300f *et seq*. The SDWA requires EPA to set national primary drinking water standards and provides for the direct control of underground injection of fluids that could potentially affect groundwater supplies. States usually assume the predominant role in executing groundwater protection programs. EPA has direct responsibility only if a State chooses not to participate in the underground injection control program. As amended in 1996, SDWA Section 1447(a) provides that Federal agencies "1) owning or operating any facility in a wellhead protection area; 2) engaged in any activity at such facility resulting, or which may result, in the contamination of water supplies in any such area; 3) owning or operating any public water system; or 4) engaged in any activity resulting, or which may result in, underground injection which endangers drinking water" shall be subject to and comply with all substantive and procedural Federal, State, interstate, and local requirements to the same extent as any person.

7-2.6 Section 108 of the Federal Facilities Compliance Act (FFCA) of 1992, 42 USC §6939e. Section 108 of the FFCA amended Subtitle C of the Solid Waste Disposal Act (42 USC §6901 *et seq.*) to establish when solid or dissolved material introduced by a source into a Federally Owned Treatment Works (FOTW) is not considered a solid waste. An FOTW is not required to satisfy the requirements of Section 108 if it decides to manage its influent as a solid waste. However, an FOTW that has decided to take advantage of a domestic sewage exclusion similar to that enjoyed by POTWs must meet the statutory requirements of Section 108.

7-3 Terms and Definitions

7-3.1 Aquatic Sediment. Sediment underlying the navigable waters of the United States.

7-3.2 Contiguous Zone. The belt of seas, 9 nautical miles wide, that is adjacent to and seaward of the territorial seas of the United States and was declared to exist in Department of State Public Notice 358 of June 1, 1972, 37 FR 11906.

7-3.3 Discharge. Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping of any pollutant, but excludes certain cases under CWA Section 402.

7-3.4 Discharge of a Pollutant

a. Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

b. Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

7-3.5 Direct Discharge. A discharge of a pollutant directly into the waters of the United States.

7-3.6 Discharge of Dredged Material. Any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States. The term includes, but is not limited to, the following:

a. The addition of dredged material to a specified discharge site located in waters of the United States;

b. The runoff or overflow, associated with a dredging operation, from a contained land or water disposal area; and

c. Any addition, including redeposit other than incidental fallback, of dredged material, into waters of the United States which is incidental to any activity, including mechanized land clearing, ditching, channelization, or other excavation.

7-3.7 Dredge and Fill Operations. Dredge and fill operations encompass construction or other work involving excavation or discharge of dredged or fill material in waters of the U.S.

7-3.8 Federally Owned Treatment Works (FOTWs). A treatment works owned and operated by the Federal government. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to the FOTW. FOTWs that discharge treated effluent directly to waters of the U.S. are "treatment works." FOTWs that discharge pretreated effluent to another treatment works for final treatment and ultimate discharge to waters of the U.S. are "pretreatment works" (FOPTWs).

7-3.9 Indirect Discharge. A nondomestic discharger introducing pollutants to a publicly owned treatment works or a federally owned treatment works.

7-3.10 Internal Waters and Inland Water

a. "Internal waters" and, except as provided in paragraph (b) of this section, "inland waters" mean:

(1) With respect to the U.S., the waters shoreward of the territorial sea baseline.

(2) With respect to any foreign country, the waters shoreward of the baseline of its territorial sea, as recognized by the U.S.

b. "Inland waters" as used in the CWA, means the waters shoreward of the lines of demarcation described in the International Regulations for Preventing Collisions at Sea (72-COLREGS), except the Great Lakes and the connecting and tributary waters as far east as Montreal, the waters of the Mississippi River between its source and Huey P. Long Bridge and all of its tributaries emptying thereinto and their tributaries, that part of the Atchafalaya River above its junction with the Plaquemine-Morgan City alternate waterway, and the Red River of the North.

7-3.11 National Pollutant Discharge Elimination System (NPDES). A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA. The term includes an approved program. NPDES programs are either EPA or State programs. State programs must be approved and authorized by EPA.

7-3.12 Navigable Waters of the United States (Navigable Waters, Territorial Waters). Except as provided in paragraph 7-3.21(b) of this section, "navigable waters of the United States," "navigable waters," and "territorial waters" are defined to include the following, except where Congress has designated them not to be navigable waters of the U.S:

a. Territorial seas of the U.S.

b. Internal waters of the U.S. that are subject to tidal influence

c. Other waters over which the Federal government may exercise constitutional authority; and

d. Internal waters of the U.S. not subject to tidal influence that:

(1) Are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage, or

(2) A governmental or authorized non-governmental body, having expertise in waterway improvement, determines to be capable of improvement at a reasonable cost (a favorable balance between cost and need) to provide, by themselves or in connection with other waters, highways for substantial interstate or foreign commerce.

7-3.13 Navy-Owned Treatment Works (NOTW). A treatment works owned by a Department of Navy (DON) activity. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to the NOTW. NOTWs that discharge treated effluent directly to waters of the U.S. are "treatment works." NOTWs that discharge pretreated effluent to another treatment works for final treatment and ultimate discharge to waters of the U.S. are "pretreatment works" (NOPTWs).

7-3.14 Nonpoint Source Discharges. Any discharges to waters of the U.S. that are not point source discharges.

7-3.15 Operator Certification. A program where a manager or operator is required by a State to complete necessary training and/or operational requirements to obtain a license or certificate to operate or manage a wastewater treatment facility. The requirements for certification vary with the State in which the wastewater treatment facility is located.

7-3.16 Point Source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

7-3.17 Pollutant. Includes dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological material, radioactive materials (other than those regulated as source, by-product, or special nuclear material (SNM) under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

7-3.18 Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment works.

7-3.19 Publicly Owned Treatment Works (POTW). Any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a State or a municipality. This definition includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW providing treatment.

7-3.20 Storm Water. Precipitation that accumulates in natural and/or constructed storage and storm water systems during and immediately following a storm event. Examples include storm water runoff, surface water runoff, street wash waters related to street cleaning or maintenance, infiltration (other than infiltration contaminated by seepage from sanitary sewers or by other discharges) and drainage related to storm events or snow melt.

7-3.21 Territorial Seas of the United States

a. With respect to the U.S., "territorial seas" means the waters within the belt, 3 nautical miles wide, that are adjacent to its coast and seaward of the territorial sea baseline.

b. With respect to any foreign country, "territorial seas" means the waters within the belt that are adjacent to its coast and whose breadth and baseline are recognized by the United States.

7-3.22 Territorial Sea Baseline. The delimitation of the shoreward extent of the territorial seas of the United States drawn according to the Convention on the Territorial Sea and the Contiguous Zone, 15 U.S.T. 1606, as recognized by the United States.

7-3.23 Toxic Pollutant. Any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

7-3.24 Treatment Works. Any domestic or industrial wastewater treatment devices or systems, regardless of ownership (including Federal facilities, such as FOTWs and NOTWs), used in the storage, treatment, recycling, and reclamation of domestic and industrial wastewater (including land dedicated for the disposal of associated sludge).

7-3.25 Treatment Works Treating Domestic Sewage. A POTW or any other sewage sludge or wastewater treatment device or system, regardless of ownership (including Federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, "domestic sewage" includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge

management program under Section 405(f) of the CWA, EPA Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance.

7-3.26 Waters of the United States

a. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide;

b. All interstate waters, including interstate “wetlands;”

c. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

d. All impoundments of waters otherwise defined as waters of the United States under this definition;

e. Tributaries of waters identified in paragraphs (a-d) of this definition;

f. The territorial sea; and

g. “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a-f) of this definition.

7-4 Requirements

7-4.1 General

a. As required by E.O. 12088 (reference (b)) and the CWA, Navy facilities will comply with all substantive and procedural requirements applicable to point and nonpoint sources of pollution. These requirements include Federal, State, interstate, and local laws and regulations respecting the control and abatement of water pollution such as load reduction requirements resulting from the development of Total Maximum Daily Loads (TMDLs) for impaired waterbodies (reference (c)). Navy facilities must comply in the same manner and to the same extent as any nongovernmental entity, including the payment of reasonable service charges.

b. The discharge of any pollutant that does not comply with effluent standards or other procedural requirements is unlawful. The discharge of radiological, chemical or biological warfare agents or low level radioactive waste is prohibited.

7-4.2 Point Source Control

a. **Discharge Permits.** Permits are required for all point source discharges to waters of the U.S. (reference (d)). Discharges must comply with all terms or conditions of EPA, State, or locally issued permits. For all discharge points in States that have an EPA-approved NPDES program for Federal facilities, permits must be requested from the applicable State environmental agency. For all discharge points in States that do not have authority to issue NPDES permits for Federal facilities, permits must be requested from EPA. If a State has a non-NPDES clean water permit program, permits must be obtained from both the State and EPA. All monitoring records must be retained as required by Federal, State and local regulations.

b. **Industrial Wastewater Treatment/Pretreatment.** Industrial wastewater discharges from Navy facilities may be subject to Federal categorical treatment or pretreatment standards (reference (e)), or other applicable standards as established by State, county and local regulations.

c. **Discharges to NOTWs and POTWs.** Indirect discharges to NOTWs and POTWs will meet all applicable Federal general and categorical pretreatment standards (reference (e)) and any State, county, and local permit requirements.

d. **Storm Water Discharges.** Storm water discharges must meet all applicable Federal, State and local permit requirements. Storm water discharges are a major contributor to surface water quality impairment. Significant sources of storm water discharge include urban (facility) runoff, industrial activity, and construction. These types of storm water discharges are either regulated under Phase I or Phase II of the CWA Storm Water Program. Phase I applies to municipal separate storm sewer systems (MS4s) serving a population over 100,000, as well as storm water discharges associated with regulated industrial activities as defined in the storm water regulations, including construction activities disturbing 5 acres of land or more. Phase II applies to MS4s serving a population less than 100,000 in an “urbanized area” and construction activities disturbing at least 1 but less than 5 acres of land. Storm water discharges are regulated as part of individual NPDES permits or under general group permits. Refer to reference (f), §122.26 (a), for information on the types of storm water discharges that are regulated. Refer to reference (f), §122.34((b)(3)(iii), for information on non-storm-water discharges such as water line flushing, lawn watering, fire fighting activities.

e. **Hazardous Pollutant Discharges.** Hazardous waste may be introduced into a treatment facility only if the facility is specifically permitted to treat the type of waste introduced under a Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) permit, or a "permit by rule" (reference (g)). The Federal Facilities Compliance Act (reference (h)) provides FOTWs with the same domestic sewage exclusion provided to POTWs, if there are reasonable sets of controls on the discharges into the FOTW.

f. **Sludge Disposal.** Discharge, treatment or incineration of treatment plant sludge must meet applicable Federal, State and local requirements which are incorporated into permits issued under CWA §402, under the appropriate provisions of other legislation (e.g. RCRA, SDWA, MPRSC, or CAA), under EPA-approved State sludge management programs, or, in a sludge-only permit (see reference (i)).

g. **Waste Disposal Sites.** Surface water runoff and leachate from waste disposal sites will conform to applicable requirements specified for disposal of solid waste (Chapter 14) or hazardous waste (Chapter 12).

7-4.3 Groundwater Protection. Discharges to groundwater must meet applicable requirements of the SDWA, the CWA, State, and local implementing requirements, and applicable permit conditions. Additional information on SDWA's Underground Injection and Wellhead Protection Program can be found in Section 8-4.2.16 of Chapter 8.

7-4.4 Dredge and Fill Operations

a. **Permits.** Applications must be made to the U.S. Corps of Engineers (COE) for: a) a permit to construct a structure in, or to otherwise alter or modify, navigable waters or wetlands, b) dredge operations, including maintenance dredging, and c) dredge disposal unless the disposal is permitted under a nationwide permit. In addition, applicants are required to obtain State certification that such actions comply with applicable State effluent limitations, water quality implementation plans, toxic effluent limitations, fish and wildlife protection plans, etc. State certifications may be done either as a part of the COE permit process or independently if no COE permit is required because of a nationwide permit. Projects covered by a nationwide permit require COE notification even though no permit application is required. Field sampling may be required to select proposed dredge disposal sites. Other surveys, including site monitoring, may be required at disposal sites before, during, and after disposal. (See reference (j))

b. **Permit Exemptions.** Projects for which environmental impact statements (EISs) have been written and submitted to Congress and that have specific congressional authorization do not require COE or State permits.

Projects covered by a nationwide general permit require COE notification, but do not require individual permits. However, on a case-by-case basis, some additional individual requirements may be applied by COE or States.

c. **Discharges of Dredged or Fill Material.** Discharges of dredged or fill material into waters under COE jurisdiction will comply with Federal regulations. Disposal by ocean dumping requires a COE permit and compliance with EPA requirements (Chapter 21).

Discharges to waters under the jurisdiction of States will comply with applicable permits and discharge regulations, including State fee schedules.

Disposal site selection may entail field sampling and analyses. Elutriate and/or bioassay testing may be required to determine if the proposed dredged materials should be classed as polluted or unpolluted. Other surveys, including site monitoring, may be required at disposal sites before, during, and after disposal.

7-4.5 In-water Construction. The COE and some States require a permit for any in-water construction. Facilities proposing in-water construction will obtain applicable permits prior to award of construction contracts, and comply with all permit conditions.

7-4.6 Nonpoint Source Control. Nonpoint source discharges must conform to best practicable management procedures defined by Federal, State or local requirements (reference (k)).

7-5 Navy Policy

7-5.1 Pollutant Reduction or Elimination. Navy Policy is to reduce or eliminate pollutants from all sources, including point sources, storm water runoffs, and nonpoint sources.

a. **Point Sources.** Navy policy is to reduce or eliminate wastewater treatment requirements by elimination or reduction of volume and pollutants at point sources.

(1) NOTWs discharging to U.S. waters shall apply for and operate under Federal and/or State discharge permits and shall achieve secondary treatment and other effluent limitations as prescribed by discharge permits.

(2) Discharges to POTWs and NOTWs shall meet all general and applicable categorical pretreatment standards. NOTWs shall develop, implement, and maintain pretreatment programs for all known dischargers to the NOTW.

(3) Operators of Navy collection systems and treatment plants shall meet applicable training and certification requirements of the State, county, city or regional regulatory authority in which the system or plant is located.

Although point sources may be in compliance with a discharge permit at the time of issuance based on existing standards, they are not automatically in compliance with new standards. Where compliance dates are not established for new standards by permit renegotiation, affected sources shall comply with applicable standards within 1 to 3 years, or as specified by EPA or the State at the time of permit issuance.

b. **Storm Water Discharges.** Navy policy requires commands to ensure that all activities comply with storm water management and pollution prevention requirements, as stipulated in permits under which the activities are covered. This includes performing an annual inspection of site to identify areas that contribute to storm water discharges associated with industrial or construction activity and revising storm water pollution prevention plans (SWPPPs), if necessary.

c. **Nonpoint Sources.** Navy policy shall be to reduce pollutants at nonpoint sources. Significant drivers for nonpoint source reductions are programs established for storm water management and TMDLs, and initiatives taken under coastal zone management plans (reference (l)) and watershed management plans.

7-5.2 Dredge and Fill Operations. Navy activities proposing to undertake any action requiring COE permitting shall apply to the COE District Engineer in the district where the proposed action is to be performed.

a. Permits for maintenance dredging shall include a permit expiration date that in no event will extend more than 10 years from the issue date. Requests for renewal from COE shall be filed with the cognizant District Engineer at least 2 years before expiration.

b. Early planning for dredge spoil disposal site selection, preparation, and use is essential. An Environmental Assessment (EA) or an Environmental Impact Statement (EIS) shall be prepared by the sponsoring Navy activity and reviewed under Chapter 2 for each MILCON project involving a change to the width or depth of a channel or other waterbody.

c. Existing dredge spoil disposal sites, approved by COE, shall be used wherever possible. Proposed new dredge spoil disposal sites shall be identified to the cognizant COE District Engineer for evaluation and approval from 2 to 2 1/2 years before project initiation.

7-5.3 In-water Construction. Navy activities shall ensure compliance with appropriate Federal, State, and local regulations.

7-5.4 Water Re-Use. To support water conservation efforts, Navy commands shall ensure that all activities implement water re-use practices to reclaim, recycle and re-use wastewater to the maximum extent feasible, taking into account economic payback, process requirements and the scarcity of water resources available to the primary water supplier for the activity.

7-5.5 Spills. Spills of sewage and hyper-chlorinated water shall be reported through the activity's chain of command. Chapter 10 contains reporting requirements for oil and hazardous substance spills.

7-5.6 Fines and Penalties. There is no waiver of sovereign immunity for fines and penalties in the CWA. This includes EPA imposed penalties, State imposed penalties, local penalties, or any penalties sought by citizens in a citizens suit. Because we cannot pay penalties, we also cannot undertake Supplemental Environmental Projects in lieu of environmental penalties.

Refer to Appendix B for more detailed and specific Navy policy on what actions should be taken upon receipt of any notice of deficiency of Federal, State, interstate, or local environmental control laws or regulations.

7-5.7 Training

a. Every person involved in operations at naval shore facilities which could result in pollution of surface or ground water shall have received environmental overview training specified in Chapter 24 of this instruction; will have received specific comprehensive training in water pollution prevention required by the CWA and implementing regulations; and will be familiar with the provisions of this chapter.

b. COMNAVFACENGCOM environmental professionals, Navy regional environmental coordinators, shore activity technical and legal environmental staff and their managers shall have received environmental overview training specified in Chapter 24 of this instruction, and shall have received introductory or executive overview training in water pollution prevention and coastal zone management.

Wastewater treatment plant operators shall have received environmental awareness training specified in Chapter 24 of this instruction, and shall have received training and certification required by applicable State and local water quality regulations. Where State and/or local regulations do not specify training, the following subjects shall be included in their training plan:

(1) Basic wastewater plant design,

(2) Wastewater plant operations,

(3) Basic maintenance/calibration of plant controls and equipment,

(4) Wastewater treatment principles,

(5) Wastewater sampling and analysis, and

(6) Wastewater plant/systems documentation and reporting requirements.

7-6 Responsibilities

7-6.1 CNO (N45) shall:

a. Coordinate the implementation of CWA requirements.

b. Issue policy and guidance as needed.

c. Act as the assessment sponsor for CWA projects.

7-6.2 COMNAVFACENGCOM shall:

a. Prepare permit applications for construction and initial operation of MILCON funded projects and pay related fees from the funds appropriated and budgeted for the projects. Provide permit applications to the activity Commanding Officer for submittal to the applicable regulatory agency.

b. Assist commands, as requested, in preparing permit applications for in-water construction, new dredging, dredge disposal, maintenance dredging, etc.

c. Assist commands, as requested, in identifying applicable effluent standards and appropriate control technologies and best management practices, and in developing storm water management plans and industrial wastewater management plans.

d. Coordinate the review of all projects for the construction of new treatment works with the appropriate Federal, State, and local regulatory agencies.

e. Maintain liaison with COE to facilitate dredge and fill project planning, preparation of EAs/EISs, and disposal site approval.

7-6.3 Regional Environmental Coordinators (RECs) shall:

a. Provide coordination and assistance to installations within the applicable region regarding implementation of this chapter.

b. Assist with resolution of issues with States and local regulators.

7-6.4 Major claimants shall:

a. Implement the CWA program requirements at their shore facilities.

b. Plan, program, budget and provide funding for current and future requirements under the CWA and revisions to the applicable regulations.

7-6.5 Commanding Officers (CO) of shore activities shall:

a. Comply with the applicable substantive and procedural Federal, State, local and regional clean water laws and regulations and with the conditions in dredge, disposal, construction, and discharge permit.

b. Cooperate with Federal, State, local, and regional environmental regulatory officials.

c. Prepare or review and sign, or designate in writing the appropriate person to sign, all applications for permits to construct wastewater treatment plants, for in-water construction, or for all new dredging, maintenance dredging, and dredge disposal operations; and obtain, renew, and pay for all new and recurring permits.

d. Operate and maintain NOTWs to ensure continuing compliance with applicable Federal, State, and local regulations and permit conditions.

e. Coordinate CWA issues and permits with COMNAVFACENGCOM Engineering Field Divisions (EFDs) and Engineering Field Activities (EFAs), with major claimants, and with RECs.

f. Integrate CWA requirements into all applicable levels of activity management through the application of program management procedures including oversight, inspection, and training, and by requesting and committing sufficient resources to ensure compliance with applicable CWA standards.

g. Identify and submit environmental compliance projects, per Chapter 1, required to bring wastewater sources into compliance with applicable requirements.

h. Improve opportunities to recycle and reclaim and reuse wastewater and sludge.

i. Develop, implement, and maintain current storm water management plans, and comply with Federal, State, and local regulations and permit conditions, as applicable.

j. Ensure environmental personnel are properly trained (and certified as applicable).

k. Implement the instructions outlined in Appendix B upon receipt of any Notice of Violation (NOV), Notice of Noncompliance (NON), warning letter, citizen suit notice, warning notice, consent order, or any other such notice of deficiency of Federal, State, interstate, or local environmental control laws or regulations.

7-6.6 CO of host activity that owns, operates or uses sewage and wastewater collection and/or treatment systems shall:

Ensure that applications for applicable Federal, State, and/or local permits are filed, and ensure compliance with all permit conditions.

7-6.7 CO or Officer In Charge (OIC) of Tenant Activity shall:

Ensure compliance with the policies of this manual and with written sewage and wastewater collection and treatment requirements established by the host CO.

CHAPTER 8

SAFE DRINKING WATER ACT COMPLIANCE ASHORE

8-1 Scope

8-1.1 This chapter identifies requirements, establishes policy, and assigns responsibilities for the production, use, protection and conservation of drinking water at shore installations in the United States and its territories.

8-1.2 References

a. 40 CFR 146, UIC Program: Criteria and Standards (http://www.access.gpo.gov/nara/cfr/index.html);

b. U.S. Environmental Protection Agency: Preparing Your Drinking Water Consumer Confidence Report, Guidance for Water Suppliers, EPA/816-R-99-002 (March 1999) (http://www.epa.gov/safewater/topics.html);

c. 40 CFR 141, National Primary Drinking Water Regulations (http://www.access.gpo.gov/nara/cfr/index.html);

d. Naval Facilities Engineering Service Center: Cross-Connection Control and Backflow Prevention Program Implementation at Navy Shore Facilities, User's Guide UG-2029-ENV (May 1998);

e. U.S. Environmental Protection Agency: Lead in Drinking Water in Schools and Non-Residential Buildings, EPA/812-B-94-002 (April 1994);

f. Naval Facilities Engineering Command: Guidance for Sampling Water Coolers (May 1998);

g. U.S. EPA/State Joint Guidance on Sanitary Surveys (December 1995);

h. Naval Facilities Engineering Service Center: Naval Water Conservation Guide for Shore Activities, User's Guide UG-2017-E&U, (July 1996), (http://navyenergy.nfesc.navy.mil /key-areas/WaterWeb.html);

i. MIL-HDBK-1165, Water Conservation, (7 Apr 1997) (http://www.efdlant.navfac.navy.mil/lantops_15/);

j. American Water Works Association Manual of Standard Practices, Emergency Planning for Water Utility Management, AWWA M19 Second Edition 1984 (http://www.awwa.org);

8-1.3 Supplemental References

a. 40 CFR 142, National Primary Drinking Water Regulations Implementation (http://www.access.gpo.gov/nara/cfr/index.html);

b. 40 CFR 143, National Secondary Drinking Water Regulations (http://www.access.gpo.gov/nara/cfr/index.html);

c. 40 CFR 144, Underground Injection Control (UIC) Program (http://www.access.gpo.gov/nara/cfr/index.html);

d. Executive Order (E.O.) 13148 "Greening the Government Through Leadership in Environmental Management", April 21, 2000 (http://www.nara.gov/fedreg/eo2000.html);

e. U.S. Environmental Protection Agency: State Source Water Assessment and Protection Programs Guidance, EPA/816-R-97-009 (August 1997) (http://www.epa.gov/safewater/topics. html);

f. U.S. Environmental Protection Agency: Pocket Sampling Guide for Operators of Small Water Systems: Phase I, EPA/814-B-92-001 (April 1992);

g. U.S. Environmental Protection Agency: Pocket Sampling Guide for Operators of Small Water Systems: Phase II and V, EPA/814-B-94-001 (July 1994);

h. U.S. Environmental Protection Agency, Office of Drinking Water: Guidance Manual for Compliance with the Filtration and Disinfection Requirements for PWSs Using Surface Water Sources, EPA570/9-89-018 (October 1989) (http://www.epa.gov/safewater/topics.html);

i. U.S. Environmental Protection Agency Region III: Public Information Bulletin, UIC Class V Injection Wells, EPA/813-F-94-005 (July 1994);

j. American Water Works Association Standards and Manuals (http://www.awwa.org);

k. Naval Facilities Engineering Service Center: Consecutive Water System Guidance Document for Navy Shore Installations, Users' Guide UG-2034-ENV (January 1999);

l. NAVMED P-5010-5, Manual of Naval Preventive Medicine, chapter 5, Water Supply Ashore (Rev 1999) (http://www.vnh.org/ PreventiveMedicine/PreventiveMedicine.html);

m. BUMEDINST 6240.10, A Standard for Potable Water, 19 July 1999 (http://navymedicine.med.navy.mil/instructions/external/external.htm);

n. MIL-HDBK-1164, Maintenance and Operation of Water Supply Systems (3 Mar 1998) (http://www.efdlant.navfac.navy.mil/lantops_15/);

o. MIL-HDBK-1005/7A, Water Supply Systems (1 September 1999) (http://www.efdlant.navfac.navy.mil/lantops_15/);

8-2 Legislation

8-2.1 Safe Drinking Water Act (SDWA). An amendment to the Public Health Service Act, the Safe Drinking Water Act (SDWA or "the Act") federalized the regulation of drinking water systems. The SDWA has been amended and /or reauthorized several times since passage as Public Law 93-523 in 1974. The SDWA has been codified as Title 42 of the United States Code (USC), Chapter 6A Public Health Service, Subchapter XII Safety of Public Water Systems (42 USC 300f-300j) http://www.access.gpo.gov/uscode/uscmain. html.

Among other things, the Act requires the U.S. Environmental Protection Agency (EPA) to set national standards for levels of contaminants in drinking water that may have an adverse effect on human health. The 1996 Amendments strengthened consumer right to know provisions and the multiple barrier approach to protecting water quality.

The SDWA provides for state implementation. Upon application to EPA, if a State has drinking water standards "no less stringent" than the Federal standards, "adequate" enforcement procedures, and variance and exemption conditions "no less stringent" than the Federal conditions, then the Federal Government grants the state primary enforcement authority. Today most of the States have such authority. Under the 1996 SDWA Amendments sovereign immunity has been waived and Federal facilities are subject to applicable state and local laws and regulations

8-3 Terms and Definitions

8-3.1 Action Level (AL). The concentration of lead or copper in water that is used to determine compliance with the Lead and Copper Rule. Under the Lead and Copper Rule, action levels have replaced lead and copper maximum contaminant levels.

8-3.2 Backflow Preventer. An approved device or assembly or piping arrangement (i.e., air gap) used to prevent backflow into a potable water system.

8-3.3 Community Water System (CWS). A public water system (PWS) that serves at least 15 service connections used by year-round residents, or regularly serves at least 25 year-round residents.

8-3.4 Consecutive Water System. A water system which has no water production or source facility of its own and which obtains all of its water from another water system. A consecutive water system may be further classified as any of the water system types shown in Figure 8-1. As an example, Section 8-3.5 defines a Consecutive Public Water System.

8-3.5 Consecutive Public Water System. A water system which has no water production or source facility of its own and which obtains all of its water from another water system and also meets the definition of a public water system.

8-3.6 Consumer Confidence Report (CCR). This report provides water quality information to consumers. The report must contain mandatory information and be delivered to customers by 1 July every year.

8-3.7 Consumer. Any person served by a PWS. Human consumption includes drinking, bathing, showering, cooking, dishwashing, and maintaining oral hygiene.

8-3.8 Customer. A billing unit or service connection to which water is delivered.

8-3.9 Consumptive Use Permit (CUP). A permit that regulates the withdrawal of groundwater.

8-3.10 Cross-Connection. Any physical arrangement whereby a water system is connected, directly or indirectly, with any other water supply system, sewer, drain, plumbing fixture or other device which contains or may contain contaminated water.

8-3.11 Disinfectant. Any oxidant including, but not limited to, chlorine, chlorine dioxide, chloramines, and ozone added to any part of the treatment or distribution process for the purpose of killing or inactivating pathogenic microorganisms.

8-3.12 Disinfection Byproducts (DBP). Disinfection byproducts are contaminants created when chemicals in source water and the distribution system react with disinfectants.

8-3.13 Injection Well. A well (depth is greater than the largest surface dimension) into which fluids are being injected.

8-3.14 Lead Free. Solders and flux are considered lead free if they contain not more than 0.2 percent lead; pipes and fittings are considered lead free if the lead content is not more than 8.0 percent

8-3.15 Lead Service Line. A service line made of lead that connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting that is connected to such lead line.

8-3.16 Maximum Contaminant Level (MCL). The maximum permissible level of a contaminant in water that is delivered to any user of a PWS.

8-3.17 Maximum Contaminant Level Goal (MCLG). The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur and that allows an adequate margin of safety. Maximum contaminant level goals are non-enforceable health goals.

8-3.18 Non-Community Water System. A non-community water system is a public water system that is not a community water system. There are two kinds of non-community water systems: transient and non-transient.

8-3.19 Non-Transient, Non-Community Water System (NTNCWS). A PWS that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.

8-3.20 Permitted PWS. A public water system that has been issued a permit or other formal authorization to operate (i.e. it has been issued a public water system identification number).

8-3.21 Point-Of-Entry (POE) Treatment Device. A treatment device applied to the drinking water entering a building for the purpose of reducing contaminants in the drinking water distributed throughout the building.

8-3.22 Point-Of-Use (POU) Treatment Device. A treatment device applied to a single tap for the purpose of reducing contaminants in drinking water at that one tap.

8-3.23 Public Water System (PWS). A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service

connections or regularly serves an average of at least 25 individuals at least 60 days out of the year. Such term includes:

a. Any collection, treatment, storage and distribution facilities under control of the operator of such system and used primarily in connection with such system, and

b. Any collection or pretreatment storage facilities not under such control, used primarily in connection with such system.

A PWS is either a community water system or a non-community water system. Figure 8-1 is provided to help installations determine what type of system they operate.

8-3.24 Sanitary Survey. An on-site review of the water sources, facilities, equipment, operation and maintenance of a PWS for the purpose of evaluating the adequacy of such sources, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

8-3.25 Selling Water. There is no definition of "selling water" in the Safe Drinking Water Act. Please see discussion under section 8-4.1.

8-3.26 Service Connection. The opening, including all fittings and appurtenances, at the water main through which water is supplied to the user.

8-3.27 Source Water Assessment Program. Under the SDWA Amendments of 1996, states were required to develop, by Feb. 6, 1999, comprehensive Source Water Assessment Programs (SWAP) that delineate source water protection areas, inventory significant contaminants in these areas, and determine the susceptibility of each public water supply to contamination.

8-3.28 Source Water Protection Program. State efforts to manage identified sources of contamination in a manner that will protect drinking water supplies, based on the SWAP.

8-3.29 Source Water Vulnerability Assessment. A study used to determine the likelihood that potential contaminant sources in a watershed or drinking water protection area will degrade the public water system's source water quality.

8-3.30 Supplier of Water. Any person who owns or operates a PWS. Under the SDWA a person is defined as an individual; corporation; company; association; partnership; municipality; or State, Federal or tribal agency.

8-3.31 Transient, Non-Community Water System (TNCWS). A non-community water system that does not regularly serve at least 25 of the same persons over 6 months per year.

8-3.32 Turbidity. The measurement of the amount of light scattered by colloidal, suspended matter in liquid. Elevated turbidity in drinking water may be indicative of water quality problems.

8-3.33 Underground Injection. Well injection, meaning the subsurface emplacement of fluids through a bored, drilled, or driven well or through a dug well where the depth of the dug well is greater than the largest surface dimension (see reference (a)).

8-3.34 Well. A bored, drilled or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension.

8-3.35 Wellhead Protection Program. A program to protect groundwater that supplies wells and well fields that contribute drinking water to public water supply systems.

8-4 Requirements

8-4.1 General. Regulatory requirements for water systems vary depending on the type of water system under consideration. However, Navy water systems must comply with all applicable Federal, State, and local regulations, executive orders and Navy policy. Water systems are initially classified as public water systems (PWS) or non-public water systems (Non-PWS). Federal, State, and local regulations for determining compliance with the SDWA generally apply to PWSs but are not applicable to Non-PWSs. Regulatory requirements for each PWS depend on the classification of the system (i.e. primary or consecutive, community water system (CWS) or non-community water system, transient non-community water system (TNCWS) or non-transient non-community water system (NTNCWS)) and the type of source water used (i.e. groundwater, surface water or groundwater under the direct influence of surface water). To determine the type of water system you are operating, refer to Terms and Definitions in Section 8-3 and Figure 8-1.

Consecutive PWSs generally are not subject to the requirements of the SDWA if they satisfy all of the following criteria specified in 40 CFR 141.3:

a. Consist only of distribution and storage facilities and do not have any collection and treatment facilities;

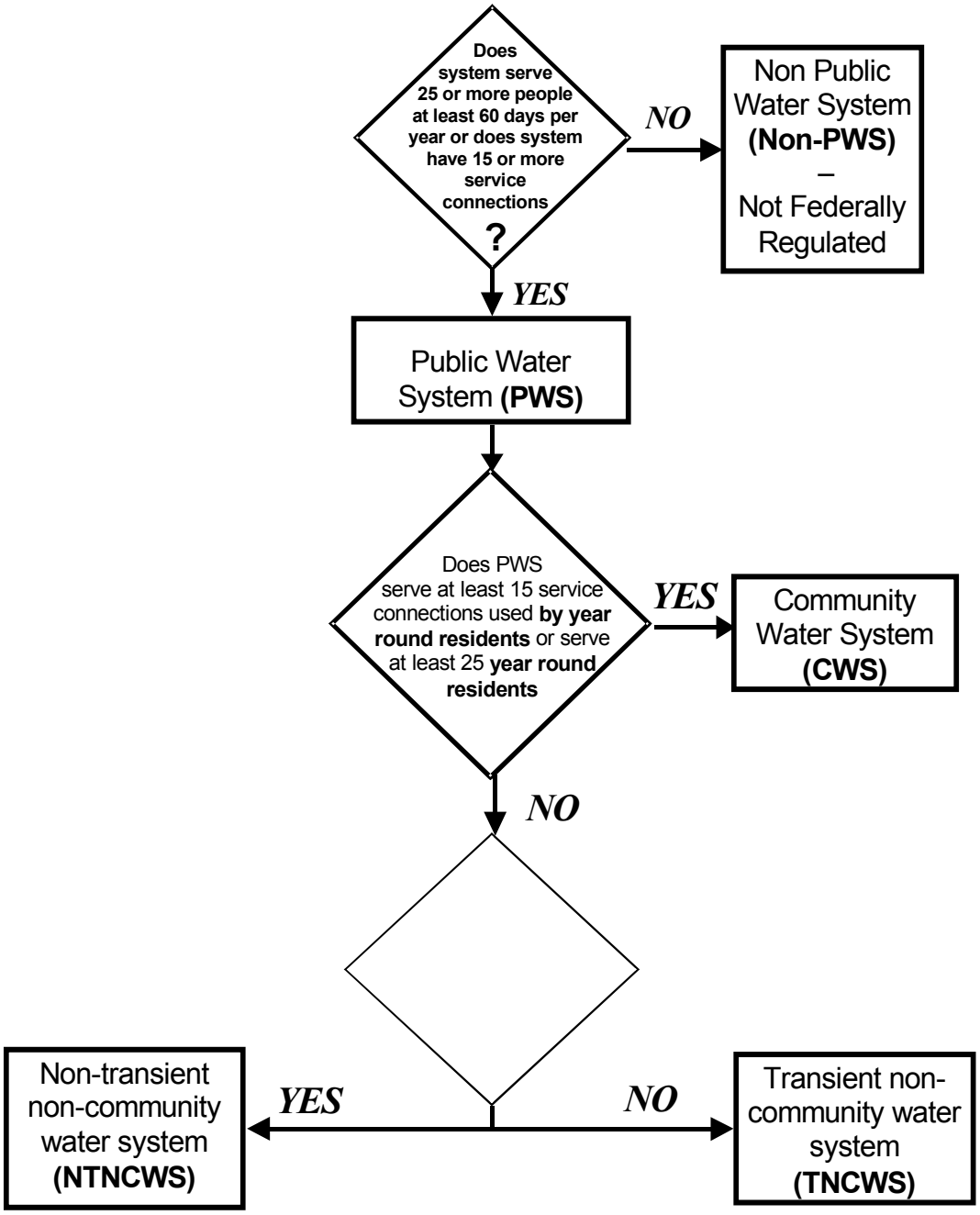
b. Obtain all their water from but are not owned or operated by a PWS to which the regulations apply;

c. Do not sell water to any persons, and;

d. Are not carriers that convey passengers in interstate commerce.

There is no definition of "selling water" in the Safe Drinking Water Act. However, an EPA Office of Groundwater and Drinking Water Memo dated March 13, 1998 defines selling water as follows: "A distributor of water for human consumption "sells" water within the meaning of the Act if it charges consumers for the water as a separate item or bills separately for the water it provides (House Report No. 93-1185). Conversely, if the entity includes charges for water in the rental fee, then it is not selling water within the context of the Act. " The Navy does not consider reimbursement for the following as selling water: (1) distribution system maintenance costs, and (2) water from one federal entity to another, as this is merely an internal allocation of funds within the executive branch. The EPA definition set out above would apply to non-federal consumers including banks, credit unions, private companies, and restaurants to which Navy distributes water.

Water System Classification Flowchart[1,2]



(1) In accordance with Federal laws, State & local laws may be more stringent.
(2) Does not address regulatory requirements of consecutive water systems. This is determined independently by each state.

Figure 8-1

If a consecutive PWS does not satisfy all of the above exemption criteria specified under 40 CFR 141.3, it may still be exempted from some regulatory requirements based on the fact that it obtains all of its water from another regulated PWS. This exemption criteria is addressed in 40 CFR 141.29. In general, the consecutive PWS would, at a minimum be required to comply with requirements pertaining to those contaminants which could be contributed by the consecutive PWS distribution system downstream of the point of connection to the regulated PWS.

Any modified monitoring would be conducted under a schedule specified by the applicable State regulatory agency and concurred in by the administrator of the U.S. Environmental Protection Agency. Information on Federal EPA Regulations can be found at: http://www.epa.gov/safewater/. In general States are responsible for implementation of SDWA programs. A directory of State water programs can be found at: http://www.awwa. org/statinfo.htm

Installations shall use laboratories certified by EPA or the cognizant State to perform all PWS SDWA compliance sample analyses. Except for required entry point samples (i.e., turbidity and fluoride), installations must collect water samples at points that represent the quality of water in the distribution system. Chapter 25 provides Navy policy regarding sampling and testing protocols.

8-4.2 Regulations. This section highlights existing and future SDWA regulations that are most relevant to Navy installations. More information on regulations and a compliance calendar can be found on the EPA Web Page: http://www.epa.gov/safewater/

a. **National Primary Drinking Water Regulations.** National Primary Drinking Water Regulations (NPDWR) or primary standards are legally enforceable standards that apply to public water systems. Primary standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. There are set standards for the following groups of contaminants: Inorganics, Organics, Total coliforms, Disinfectants and Disinfection Byproducts and Radionuclides. A table listing all contaminants and standards can be found at (http://www.epa.gov/safewater/mcl.html)

For each contaminant so identified, EPA establishes a "maximum contaminant level" (MCL), a treatment technique, or an action level. Where feasible, this MCL, treatment technique or action level has been used to establish the National Primary Drinking Water Regulation (NPDWR) for the contaminant. Once issued, NPDWR are mandatory for all PWSs. The Act also requires EPA to identify "maximum contaminant level goals" (MCLGs), which are non-enforceable goals for contaminants that may have an adverse effect on human health and are known or anticipated to occur in PWSs. The goal of the Safe Drinking Water Act is to move towards implementing these MCLGs when possible.

(1) **Arsenic Rule.** The EPA is reducing the current 50 parts per billion (ppb) standard. EPA published a new standard of 10 ppb in January of 2001. This standard was finalized in October of 2001. Water systems must comply with this standard by January 2006.

(2) **Radon Rule.** In November of 1999 EPA proposed new standards for Radon in drinking water. This Rule will apply to CWSs that use ground water or a mixture of ground water and surface water. A major provision of the proposal is the option to implement a multimedia mitigation program.

(3) **Radionuclides Rule.** In December of 2000 EPA updated standards for radionuclides in drinking water. EPA also set a new standard for uranium. The standards are: combined radium 226/228 (5 pCi/L); beta emitters (4 mrems); gross alpha standard (15 pCi/L); and uranium (30 µg/L).

(4) **Total Coliform Rule.** This rule sets requirements for coliform levels in drinking water. Coliform bacteria in drinking water indicate that the treatment system is not working or that there are problems in the distribution system. Bacteriological contamination of the drinking water system typically results in gastrointestinal problems. However, in some cases, more serious illness or death can result. EPA standards require that systems detect coliforms in no more than 5 percent of samples taken each month. The minimum number of samples a system must take depends on system size and is outlined in 40 CFR 141.21.

(5) **Surface Water Treatment Rule.** The objective of this rule is to prevent waterborne diseases caused by viruses, Legionella, and Giardia Lamblia. The rule requires that water systems using surface water and ground water under the direct influence (GWUDI) provide filtration and disinfection. Under certain criteria the filtration requirement can be waived, however there are no exceptions to the disinfection requirement.

(a) **Interim Enhanced Surface Water Treatment Rule.** This Rule becomes effective January 1, 2002. The rule strengthens filter turbidity performance and monitoring requirements in order to optimize treatment reliability. An overall goal of this rule is to minimize levels of Cryptosporidium in finished water. The Rule applies to public water systems serving at least 10,000 people that use surface water or ground water under the direct influence of surface water. The Rule also requires states to conduct sanitary surveys for all surface water and GWUDI systems, including those that serve fewer than 10,000 people.

(b) **Filter Backwash Recycle Rule.** Regulated entities must comply with this rule starting December 8, 2003. This Rule applies to all public water systems that use surface water or ground water under the direct influence of surface water; utilize direct or conventional filtration processes; and recycle spent filter backwash water, sludge thickener supernatant, or liquids from dewatering processes. Recycle systems will be required to return spent filter backwash water, thickener supernatant, and liquids from dewatering process prior to the point of primary coagulant addition unless the State specifies an alternative location

(c) **Long-Term 1 Enhanced Surface Water Treatment Rule.** This Rule is being finalized. The rule will apply to public water systems using surface water or ground water under the direct influence of surface water. This rule proposes to extend protections against Cryptosporidium and other disease-causing microbes to water systems that serve fewer than 10,000 people annually.

(d) **Long-Term 2 Enhanced Surface Water Treatment Rule.** This Rule is in the development phase. The intent of the rule making process is to develop requirements that will further protect the public from microbial contaminants.

(6) **Groundwater Rule.** This Rule is expected to be final in 2002. The purpose of this rule is to prevent microbial contamination of drinking water systems that use groundwater. As proposed, the rule will require sanitary surveys be conducted by the State every 3 years for community water systems

and every 5 years for non-community water systems. The proposed rule contains additional requirements such as hydro geologic sensitivity assessment and enhanced source water monitoring for certain systems.

(7) **Disinfectant/ Disinfection By-Products and the Trihalomethane Rule.** A CWS that serves at least 10,000 people and adds a disinfectant in any part of the treatment system must comply with the Total Trihalomethane Rule. This Rule set an interim MCL for total trihalomethanes (TTHM) of 0.10 mg/l as an annual average. The Disinfectant/Disinfection By-Product Rule, Stage 1 and 2, will replace this Rule.

(a) **Stage 1 Disinfectant/ Disinfection By-Product Rule.** This Rule applies to all community water systems and no transient non-community water systems that use a chemical disinfectant in any part of their system. Maximum Residual Disinfectant Levels (MRDLs) are established for disinfection using chlorine, chloramine and chlorine dioxide. Maximum contaminant levels are established for the disinfection by-products total trihalomethanes, haloacetic acids, chlorite and bromate. The compliance deadline for large systems is January 2002. For small systems the compliance deadline is January 2004.

(b) **Stage 2 Disinfectant/ Disinfection By Product Rule.** This Rule is in the development phase. The intent of the rule making process is to develop requirements that will further protect the public from disinfectant residuals and disinfection by products. EPA is required to finalize this Rule by May 2002.

(8) **Consumer Confidence Reporting Rule.** Community water systems shall prepare and provide to their consumers annual reports on the quality of the water delivered by the system. The reports must be delivered by 1 July on an annual basis. Each report must contain data collected during, or prior to, the previous calendar year. Requirements are outlined in 40 CFR 141.151 through 141.155 and reference (b).

Each community water system shall deliver one copy of the consumer confidence report (CCR) to each of its customers. States may waive the mailing requirement for community water systems serving fewer than 10,000 persons. In such cases, systems would be required to inform their customers that the report will not be mailed, make the report available on request to the public, and publish the report annually in one or more local newspapers serving the areas in which the systems' customers are located. Alternative delivery methods should be used to make a "good faith" effort to reach consumers who do not receive water bills. A good faith effort would include a mix of methods appropriate to the particular system. In states with primary enforcement authority, utilities must mail a copy of the completed CCR to the State, followed, within 3 months, by a certification that the report has been distributed to customers and that the information in the CCR is correct.

(9) **Unregulated Contaminant Monitoring Rule.** Large PWS and some small PWSs are required to collect data on a selection of unregulated contaminants. This Rule has two phases; List 1 and List 2. Data from this monitoring will be used in future rule making.

(10) **Public Notification.** In May of 2000 EPA updated the Public Notification Rule. The new Rule has a three-tiered notification system. The owner or operator of a PWS that fails to comply with an applicable MCL, treatment technique, or that fails to comply with the requirements of any schedule prescribed under a variance or exemption, shall notify persons served by the system. The notices shall

include specific language about the health effects of each contaminant. The PWS shall publish notices by newspaper, mail delivery, hand delivery, radio, and television announcements depending upon the type of violation or risk involved.

(11) **Lead and Copper Rule** PWSs at Navy installations shall comply with all applicable requirements for the control of lead and copper, as stated in the Federal Lead and Copper Rule (LCR) (see Subpart I of reference (c)). This is to ensure that the levels of lead and copper remain below the levels associated with health risks in treated (finished) water and at the consumer's free flowing tap. Per reference (c) and if approved by the State Regulatory Agency or EPA (whichever has primacy), shore installations may combine their consecutive PWSs monitoring plan as part of the supplier's plan, instead of treating each as a separate system. In January of 2000 EPA published minor revisions to the Lead and Copper Rule.

The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted per reference (c) is greater than 0.015 mg/L (i.e., if the 90th percentile lead level is greater than 0.015 mg/L). The copper action level is exceeded if concentrations of copper in more than 10 percent of tap water samples collected during any monitoring period conducted per reference (c) is greater than 1.3 mg/L (i.e., if the 90th percentile copper level is greater than 1.3 mg/L).

As specified in reference (c), if an action level is exceeded, installation PWSs must collect additional water quality parameter samples. Optimal corrosion control treatment may also be required. Should prescribed treatment options fail to bring lead levels below the action level, lead service lines may have to be replaced.

Water systems that meet the lead and copper action levels during specified monitoring periods may reduce the number and frequency of sampling in accordance with reference (c).

(a) **Lead Containing Pipe, Solder, Fixtures, Fittings and Flux.** Section 1417(a)(1) of the SDWA requires the use of lead free pipe, fixtures, fittings, solder, or flux in the installation or repair of any system for the provision of piped water for human consumption. Plumbing fittings and fixtures such as faucets and water coolers intended by the manufacturer to dispense water for human ingestion shall be in compliance with standards established in 42 U.S.C. 300g-6(e). In 1998 an amendment to the SDWA known as the Lead Contamination Control Act (P.L. 100-572) became law. This amendment requires testing and corrective action for lead contamination in drinking water in schools and day care centers.

(12) **Cross-Connection and Backflow Prevention.** Cross-connection control programs apply to building interior domestic plumbing systems, fire protection plumbing systems, and exterior water distribution systems. These programs, overseen by States with SDWA primacy, help ensure compliance with primary and secondary drinking water standards by establishing policy, procedures, and instructions for installing, repairing, maintaining, inspecting, and testing backflow preventers. Reference (d) provides guidance to Navy installations for complying with this requirement.

(13) **Source Water Assessment and Source Water Protection Programs.** The SDWA Amendments of 1996 required all States to establish Source Water Assessment Programs (SWAP) and submit plans to the Environmental Protection Agency (EPA) by February 6, 1999 detailing how they would delineate source water protection areas, inventory significant contaminants in these areas, and

determine the susceptibility of each public water supply to contamination. The States have up to 2 years after EPA program approval to complete the source water assessments.

(14) **Operator Certification.** The 1996 Amendments to the SDWA requires states to develop operator certification programs. Specifically these programs must specify minimum standards for operators of community and non-transient, non-community public water systems. Details include provisions for certification, re-certification and grandfathering.

(15) **Recordkeeping.** Maintain records showing monthly operating reports for at least 5 years, and records of bacteriological results for not less than 5 years, and chemical results for not less than 10 years. Lead and copper monitoring results must be kept for at least 12 years.

b. **National Secondary Drinking Water Regulations.** For contaminants that may cause the drinking water to become aesthetically unpleasing, the Act requires EPA to specify the maximum contaminant level requisite to protect the public welfare. These contaminants are regulated under the National Secondary Drinking Water Regulations (NSDWR). Although they are not Federally enforceable, several State SDWA programs provide for enforcement of National Secondary Drinking Water Regulations. If the State enforces NSDWRs then Navy activities shall comply.

c. **Underground Injection Program.** The SDWA requires each State to have an Underground Injection Control Program (UICP) to ensure that underground injection does not endanger underground sources of drinking water. All groundwater injection systems must be permitted or (authorized by rule). Under these requirements, installations must implement a program that includes:

(1) Establishing and maintaining an underground injection well inventory.

(2) Procedures for proper well closure.

There are five classes of UIC wells. The broadest category is Class V, which includes things such as French drains and some septic systems.

d. **Wellhead Protection Program.** Installations that receive drinking water from wells must take measures to minimize contamination. These installations shall establish a wellhead protection program that meets applicable State or local wellhead protection requirements

8-5 Navy Policy

8-5.1 General. Navy installations operating water systems shall comply with all applicable Federal, State, and local safe drinking water regulations, executive orders and Navy policy. Navy policy provides additional protection to consumers.

8-5.2 Water System Monitoring. Navy installations that own and operate a consecutive PWS subject to full or partial exemption from regulatory monitoring requirements under 40 CFR 141.3 or 141.29, respectively, shall submit a letter to the State regulatory agency explaining the degree to which exemption criteria are applicable and request the exact requirements to be imposed on the consecutive PWS. The State's response letter is to be permanently retained in Navy files.

Navy water systems will, at a minimum, accomplish the monitoring described in the following sections. This monitoring is required regardless of variance or exemptions from regulatory monitoring requirements. Sampling and testing shall comply with chapter 25 requirements.

a. **Bacteriological Monitoring.** Navy PWSs shall perform bacteriological monitoring as specified in the Total Coliform Rule at 40 CFR 141.21. Consecutive non-community water systems may request waivers from this requirement. Waivers shall be submitted by claimants to CNO for approval. The use of EPA-approved kits by training personnel is acceptable for Navy policy total coliform analyses. However, if a sample tests positive, follow up analysis must be accomplished using a certified laboratory.

b. **Asbestos.** All Navy water systems with asbestos cement pipes shall monitor for asbestos. At a minimum one sample shall be taken every three years.

c. **Disinfection By-Products.** Navy CWSs shall monitor for disinfection by-products. Systems shall monitor as directed in 40 CFR 141.132.

d. **Lead in Priority Areas.** All Navy installations shall sample, test, and maintain resultant records for all drinking water coolers and outlets in the following priority areas to determine the presence of lead: primary and secondary schools, day care centers, hospital pediatric wards, maternity wards, and food preparation areas located on medical facilities. References (e) and (f) provide program information including rationale and sampling protocols. If initial screening results exceed 20 ppb in 250-mL samples, installations shall use full protocol sampling on affected outlets. If full protocol sampling exceeds 20 ppb, they shall secure the affected water outlets from service and institute permanent corrective measures.

A copy of all test results shall be made available for all schools, day care centers, and medical facilities where testing has been conducted. A notice of availability of the testing results shall be sent to the parents or legal guardians of children attending the affected school.

e. **Lead and Copper in Water Systems.** Navy consecutive PWSs that serve family housing and were not included in the primary system sampling pool (at the time the primary system performed Lead and Copper Rule monitoring) for lead and copper shall sample for lead and copper. Installations shall ensure the number and location of samples are sufficient to be representative of the system and in conformance with Lead and Copper Rule procedures.

This requirement can be waived if Navy installations operating consecutive PWS water systems document that their water supplier passed its Lead and Copper Rule monitoring and that the water being supplied to them is non-corrosive. A formal waiver does not need to be submitted but documentation must be maintained in drinking water program records.

f. **Review of Primary PWS Records.** Consecutive PWSs shall, at least once a year, review the monitoring reports of the primary PWS. Installations shall use these reports, and other sources of information, to determine the risk of water quality deterioration within the distribution system. Installations shall ensure that water quality has not degraded above the MCL for parameters within the distribution system.

8-5.3 Cross-Connection Control and Backflow Prevention Program Implementation. All shore installations that own or operate a water system shall develop and implement a Cross-Connection Control

and Backflow Prevention Program. At a minimum, the cross-connection control and backflow prevention program shall include procedures and mechanisms to:

a. Find and eliminate existing cross-connections and prevent new cross-connections.

b. When cross-connections cannot be eliminated, install, inspect, and test backflow preventers.

c. Keep an inventory of all existing backflow preventers.

d. Certify all backflow preventers as required by the regulatory agency. If there is no regulatory requirement, then all backflow preventers should be certified at least once every 6 months for high hazards and once every 12 months for low hazards by a certified inspector.

e. Promptly repair or replace defective backflow preventers. Retain cross connection and backflow preventer inspection and maintenance records for at least 5 years.

Reference (d) provides guidance to Navy installations for complying with this requirement.

8-5.4 Sanitary Surveys. In many instances, a State may require treatment plants or PWSs that are experiencing compliance problems, particularly with microbial pathogens, to perform a sanitary survey. The State regulatory agency will usually perform the survey. If the State allows, the installation can use a service provider of choice to complete the survey. In the absence of a State requirement, all Navy PWSs shall perform a sanitary survey every 5 years.

a. **Survey Requirements.** For treatment plants, the survey should include the following:

(1) Verification and reevaluation of vulnerability assessments, watershed protection programs, and wellhead protection programs, as applicable.

(2) Examination of the source water physical components and condition.

(3) Schematic diagrams of the treatment process and examination and evaluation of the adequacy and appropriateness of all elements of the current treatment process, including an assessment of operational flows versus treatment process rated capacity and, where appropriate, CT assessment (CT is defined in 40 CFR 141.2).

(4) Examination and evaluation of the operation and maintenance of the treatment facility including the condition and reliability of equipment, operator qualifications, use of approved chemicals, record keeping, process control, and safety programs.

(5) Evaluation of the ability of the treatment plant to respond to changes in raw water fluctuations.

(6) Evaluation of the treatment plant's emergency power supply and security measures.

b. **Distribution System Sanitary Survey Review.** Concerning the distribution system, the sanitary survey should include a review of the operations and maintenance program to ensure attention to the following areas of concern:

(1) Elimination of unneeded or excess storage.

(2) Adequate turnover of storage tanks.

(3) Storage tank cleaning and maintenance.

(4) Adequate disinfection practices during all main repairs and replacement.

(5) If applicable, an effective corrosion control program.

(6) A comprehensive cross connection control program.

(7) An aggressive valve and hydrant exercise program.

(8) An adequate water quality monitoring program that achieves compliance with the appropriate regulations and provides for effective water quality control.

(9) An adequate flushing program, preferably a Unidirectional Flushing (UDF) program that is implemented on a yearly basis.

For more information on sanitary surveys, see reference (g).

8-5.5 Record Keeping. In the absence of more stringent Federal, State, or local record keeping requirements, shore installations shall maintain records as follows:

a. Bacteriological Results - 5 years.

b. Chemical Results - 10 years.

c. Lead/Copper testing results - 12 years.

d. Actions Taken to Correct Violations- 3 years after acting on the particular violation involved.

e. Sanitary Survey Reports - 10 years.

f. Variance or Exemption Records - 5 years following the expiration of such variance or exemption.

g. Water Treatment plant and/or Distribution System Operating Records – 5 years.

h. Cross Connection Inspection Records – 5 years.

i. Consumer Confidence Reports – 5 years.

8-5.6 Water Conservation. Water is a limited but recyclable resource. Navy installations shall, when economically practicable, implement water conservation programs to include:

a. Installation of water efficient industrial equipment and recycling of industrial process water.

b. Low flow showers, toilets, faucets and other devices where applicable.

c. Timely repairs of water service line leaks and main breaks.

d. Routine leak detection surveys.

See references (h) and (i) for additional guidance.

8-5.7 Exemption from Permitting. Navy installations that qualify for exemption from PWS permitting shall apply, in writing, to the regulatory agency with SDWA primacy for an exemption. In some cases regulators issue a permit when it is not required.

8-5.8 Operation and Maintenance. Installations that own and/or operate water systems (public and non-public, permitted and non-permitted) shall develop and implement an operation and maintenance program applicable to the system. Minimum requirements of the program are to meet the requirements of reference (c), in particular 40 CFR 141 paragraph 141.63(d)(3), and include the proper implementation and documentation of:

a. Emergency and preventive maintenance.

b. System disinfection after maintenance work is performed.

c. Scheduled flushing of the system.

d. Reduction of water quality problems (as needed).

e. Implementation and documentation of a valve exercise and maintenance program.

f. Proper operation and maintenance of storage tanks.

g. Maintenance of current water distribution maps.

h. Documentation of location and dates of water line breakage.

i. Documentation of emergency operations procedures required as a result of events such as earthquakes, hurricanes, chemical releases and terrorist activities. Determine response roles and responsibilities as well as contingency plans for providing potable water to the Navy installation. Reference (j) provides information on emergency planning.

8-5.9 Consumer Confidence Reports. Navy consecutive CWSs shall obtain a copy of their water suppliers CCR and amend this report with information on any additional testing or exceedances and then distribute to consumers. For exceedances, only report data based on certified laboratory results. A good faith effort shall be made to ensure that all consumers are aware of the CCR and additional information. Recommended methods of report delivery include mailing to each housing unit, publishing in the command newspaper, posting on a web site, and posting in conspicuous locations in each building on the installation.

8-5.10 Consumptive Use Permits. In coordination with legal and technical staff at the claimant and appropriate regional commander, installations that withdraw groundwater shall:

a. Document historical water use;

b. Determine reasonable foreseeable future water uses;

c. Evaluate water rights laws;

d. Determine on a case by case basis whether the installation should obtain a consumptive use permit; and

e. Ensure, if applying for a consumptive use permit, that restrictions will not impact mission requirements.

8-5.11 Training

a. **General**. All Navy personnel involved in the drinking water program shall receive appropriate environmental training, refer to Chapter 24 for detailed information.

b. **Water Treatment and Distribution System Operators.** Installations shall ensure their water treatment and distribution system operators are trained and certified per applicable Federal, State, and local regulations. Training should include the following elements:

(1) Basic water plant and/or distribution system design.

(2) Basic water plant and/or distribution system operation.

(3) Basic maintenance and calibration of plant controls and equipment.

(4) Water plant and/or distribution systems treatment principles, including chemical storage and handling.

(5) Water sampling and analysis.

(6) Water plant and/or distribution system documentation and reporting requirements.

(7) Cross-connection control and backflow prevention.

8-5.12 Fines and Penalties. The 1996 amendments to the SDWA waive sovereign immunity for the payment of fines and penalties imposed by Federal, State or local agencies for violations. In addition, EPA may assess administrative penalties of up to $25,000 per day per violation.

8-6 Responsibilities

8-6.1 CNO (N45) shall:

a. Coordinate the overall implementation of SDWA requirements.

b. Issue policy and guidance as needed.

c. Act as the assessment sponsor for SDWA projects.

d. Approve or disapprove monitoring waivers for bacteriological sampling by Navy consecutive non-community water systems.

8-6.2 COMNAVFACENGCOM (HQ, EFDs, EFAs and NFESC) shall:

a. Assist CNO (N45) in providing Navy-wide guidance regarding matters relating to drinking water .

b. Provide engineering, contracting, and legal assistance, upon request, to major claimants and installations.

c. Maintain drinking water information systems.

8-6.3 Chief, Bureau of Medicine (CHBUMED) shall:

a. Establish and publish appropriate standards of water quality and monitoring requirements for Navy water systems ashore, afloat and in the field.

b. Provide health-related advice to Navy commands in carrying out their responsibilities for drinking water quality and distribution.

8-6.4 Regional Environmental Coordinators shall:

a. Provide coordination and assistance to installations within the applicable region regarding implementation of this chapter.

b. Assist claimants with resolution of issues and communication with CNO (N45) and Federal, State, and local regulators.

8-6.5 Major claimants shall:

a. Implement the SDWA program requirements at their shore installations.

b. Plan, program, budget, and provide funding for current and future requirements of the SDWA, state and local regulations, and applicable executive orders.

8-6.6 Commanding Officers (COs) Or Officers in Charge (OICs) of shore installations shall

a. Ensure that the installation is in compliance with all Federal, State and local regulations, executive orders and Navy policy pertaining to drinking water. This includes planning, programming and budgeting resources to meet requirements.

b. Ensure contracts between the Navy and water suppliers require the supplier to supply the results of all permit required National Primary Drinking Water Regulation (NPDWR) monitoring that was performed on raw and treated water that serves the applicable Navy installation and/or activity at least once a year.

c. Ensure that all personnel involved in the drinking water program are properly trained.