

CHAPTER 11

PCB MANAGEMENT ASHORE

11-1 Scope

This chapter identifies requirements and responsibilities applicable to the prevention of pollution from polychlorinated biphenyls (PCBs) at Navy shore facilities within the United States, Commonwealth of Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands. Navy policy with respect to activities in foreign countries is provided in Chapter 18.

11-1.1 References. Relevant references are:

- a. 40 CFR 125, Best Management Practices Criteria Under Clean Water Act (CWA);
- b. 40 CFR 260-270, Environmental Protection Agency (EPA) Regulations Implementing Resource Conservation and Recovery Act (RCRA);
- c. 40 CFR 372, EPA Toxic Chemical Release Reporting Regulations;
- d. 40 CFR 760-761, EPA Regulations for Controlling PCBs;
- e. DoD Directive 4001.1 of 4 September 1986, Installation Management; (NOTAL)
- f. DoD Directive 4140.1 of 4 January 1993, Material Management Policy; (NOTAL)
- g. DoD Directive 6050.8 of 27 February 1986, Storage and Disposal of Non-DoD Owned Hazardous and Toxic Materials on DoD Installations; (NOTAL)
- h. OPNAVINST 5100.23D, Navy Occupational Safety and Health (NAVOSH) Program Manual; (NOTAL)

i. SECNAVINST 5191.1, Storage and Disposal of Non-DoD-Owned Hazardous and Toxic Materials on DON Installations; (NOTAL)

j. Naval Facilities Engineering Services Center (NFESC) 20.2-028C, PCB Program Management Guide (NOTAL).

11-2 Legislation

11-2.1 Toxic Substances Control Act (TSCA). TSCA generally bans the use, manufacture, processing, and distribution in commerce of PCBs. TSCA and the PCB regulations also strictly regulate the marking, storage, and disposal of PCBs. Regulations issued under TSCA require generator identification numbers and the manifesting of PCB wastes. Additionally, in some cases, States regulate PCBs more stringently than the Federal program, including the regulation of PCBs at concentrations less than 50 parts per million (ppm) as RCRA hazardous waste.

11-3 Terms and Definitions

11-3.1 Capacitor. A device for accumulating and holding a charge of electricity consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

- a. **Small Capacitor.** A capacitor that contains less than 1.36 kg (3 lbs) of dielectric fluid.
- b. **Large, High Voltage Capacitor.** A capacitor that contains 1.36 kg (3 lbs) or more of dielectric fluid and operates at 2,000 volts (ac or dc) or above.
- c. **Large, Low Voltage Capacitor.** A capacitor that contains 1.36 kg (3 lbs) or more of dielectric fluid and operates below 2,000 volts (ac or dc).

1 November 1994

11-3.2 In or Near Commercial Buildings.

Within the interior of, on the roof of, attached to the exterior wall of, in an adjacent parking area serving, or within 30 meters of a non-industrial, non-substation building. Commercial buildings include:

- a. Civilian or Navy personnel assembly buildings
- b. Educational properties
- c. Institutional properties (including museums, hospitals, clinics)
- d. Residential properties (living quarters)
- e. Stores
- f. Office buildings (including administrative buildings)
- g. Transportation centers (including airport terminal buildings, bus stations, or train stations).

11-3.3 Non-PCB Transformer. Any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB transformer or a PCB-contaminated transformer cannot be classified as a non-PCB transformer until reclassification has occurred per the requirements of reference (d).

11-3.4 PCB or PCBs. Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances that contain such substance. Prior to stringent regulation of PCBs, PCBs were used in a variety of applications as a fire retardant and for other purposes, such as sound insulating felt in submarines and electrical cables. Often, PCBs were added in these applications without being specified in material or equipment procurement specifications; thus, the presence of PCBs cannot always be determined through review of applicable procurement documents. In the disposal of materials and components, care

should be taken to identify all potentially hazardous substances and carry out the disposal accordingly.

11-3.5 PCB Article. Any manufactured article, other than a PCB container, that contains PCBs and whose surface(s) have been in direct contact with PCBs. This includes capacitors, transformers, electric motors, pumps, pipes, and any other manufactured items.

11-3.6 PCB Article Container. Any package, can, bottle, bag, barrel, drum, tank or other device used to contain PCB articles or PCB equipment, and whose surface(s) has not been in direct contact with PCBs.

11-3.7 PCB Container. Any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB articles and whose surface(s) have been in direct contact with PCBs.

11-3.8 PCB-Contaminated Electrical Equipment. Any electrical equipment, including but not limited to transformers, capacitors, circuit breakers, re-closers, voltage regulators, switches, electromagnets, and cable, that contain 50 ppm or greater PCB, but less than 500 ppm PCB.

11-3.9 PCB Equipment. Any manufactured item, other than a PCB container, that contains a PCB article or other PCB equipment. This includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

11-3.10 PCB Item. Any PCB article, PCB article container, PCB container, or PCB equipment that deliberately or unintentionally contains any PCB or PCBs (50 ppm or greater).

11-3.11 PCB Leak. Any instance in which a PCB item has any PCB on any portion of its external surface or surroundings.

11-3.12 PCB Transformer. Any transformer that contains 500 ppm PCB or greater. The following transformer classifications are given:

1 November 1994

- a. <50 ppm Non-PCB Transformer.
- b. 50-499 ppm PCB Contaminated Transformer.
- c. >500 ppm PCB Transformer.

11-3.13 PCB Waste Generator. Any person whose act or process produces PCBs that are regulated for disposal or whose act first causes PCBs or PCB items to become subject to disposal requirements, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated.

11-3.14 Quantifiable Level/Level of Detection. For PCB analysis, quantifiable level/level of detection means 2 micrograms/gram (2 ppm) from any resolvable gas chromatographic peak.

11-3.15 Totally Enclosed Manner. Any manner that will ensure no exposure of human beings or the environment to any concentration of PCBs.

11-4 Requirements

11-4.1 General. Except as authorized in reference (d), EPA regulations ban the use of PCBs in any manner not totally enclosed. Reporting requirements for PCB spills are specified below.

11-5 Navy Policy

11-5.1 Compliance with PCB Management Requirements

a. Navy Activities. Navy activities shall comply with the requirements of reference (d) and applicable State and local PCB management requirements. Reference (j) has been designed to assist Navy activities in complying with the Federal regulations governing PCBs. In addition, Navy activities shall observe the following additional requirements:

(1) PCB Materials. All items or materials containing PCBs or suspected of containing PCBs

shall be considered regulated unless excepted by regulation. PCBs exist in Navy electrical equipment and hydraulic and lubricating oils as described and authorized for use (subject to restrictions in reference (d)). The Naval Sea Systems Command (NAVSEASYS COM) is establishing appropriate authorizations and controls for these materials and is issuing material control requirements as NAVSEASYS COM PCB Advisories. Repair, removal handling, storage and disposal of all PCB materials shall be done per NAVSEASYS COM PCB Advisories in addition to Federal, state and local requirements.

(2) PCB Materials. The Federal PCB Spill Cleanup Policy, presented in reference (d), applies to spills that occur after 4 May 1987, and applies to the response to spills resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater. (Spills that occurred before 4 May 1987 are to be cleaned up under requirements established at the discretion of the EPA.) PCBs are listed in Federal regulations as a Hazardous Substance. A spill of a reportable quantity of "pure PCB" shall be immediately reported as required by regulation (see Chapter 10). The quantity of "pure PCB" spilled can be calculated using the PCB concentration of the spilled material, the amount of the material spilled, and the density of the particular type of PCB (if unknown, assume 10 lbs/gallon). Under the National Contingency Plan (NCP), all spills involving 1 pound or more, by weight, of PCBs shall be reported to the National Response Center (NRC) at 1-800-424-8802. (In the Washington, D.C. area, the number is 202-426-2675.)). Spills that directly contaminate surface water, sewers, drinking water supplies, grazing lands, or vegetable gardens shall be reported to the appropriate EPA regional office within 24 hours. States, particularly those which regulate PCBs as a hazardous materials/hazardous waste (HM/HW), may have a more strict reporting requirement. Regardless of the reporting requirement, all PCB spills shall be cleaned up per reference (d).

(3) Contractors. Activities shall ensure that contractors performing work for the Navy on Navy property comply with all applicable PCB

requirements while on-site, including Navy requirements.

11-5.2 Navy PCB Annual Report. All Navy shore activities that generate, use, treat, store, and/or dispose of PCBs shall annually inventory or validate all PCBs and PCB items per the procedures published by NFESC and as required by applicable Federal and State regulations.

11-5.3 Navy and Defense Logistics Agency Interface on PCBs. Reference (f) designates the DLA's DRMS as the responsible agency for worldwide disposal of all PCBs and PCB items. However, reference (e) permits commanding officers (COs) to contract directly for PCB disposal service when, "...they can get a combination of quality, responsiveness, and cost that best satisfies their requirements."

Navy installations shall use the DLA PCB contract disposal services as much as economically and operationally feasible. However, when necessary to get the combination of quality, responsiveness, and cost that best satisfies installations requirements, Navy installations may request some other appropriate contract authority to provide contracting services for PCB disposal. An installation not using DRMS contract services shall insure the contract requirements comply with Federal, State and local PCB regulations, shall ensure contract requirements and contract quality control procedures are at least as stringent as those used by DRMS, shall obtain concurrence by their major claimant, and shall notify CNO (N45) of each contract for such services.

11-5.4 PCB Transformers in Commercial Buildings. PCB transformers in commercial buildings shall be registered with building owners. PCB transformers in or near commercial buildings shall be registered with owners of all buildings located within 30 meters of the PCB transformer(s). For Navy installations, compliance with the requirement is adequate if PCB transformers in or near commercial buildings are registered:

a. For Navy tenants, with the organization that prepares fire evacuation plans.

b. For non-Navy tenants, registration is made to the tenant.

11-5.5 Navy PCB Equipment Removal Policy. Navy policy is to eliminate PCBs from all Navy owned electrical distribution systems and equipment, hydraulic fluids, and cooling and lubricating oils, to the maximum extent practicable. The following procedures shall be followed:

a. **Transformers:**

(1) Determine by EPA-approved method, the PCB concentration for all pad mounted and pole mounted transformers. Transformers shall be marked: Labeled with a tag, or other appropriate means with the sample identification number and concentration of PCBs. PCB test results (in ppm) for each transformer shall be noted in the activity's records.

(2) By October 1998, eliminate all transformers containing 500 ppm or more PCBs. By October 2003, eliminate all transformers containing 50 ppm or more PCBs. To reduce future potential liabilities, transformer elimination shall be accomplished by replacement or removal with load transfer to non-PCB transformers. Retrofill shall be an acceptable alternative to replacement for transformers when it has a clear economic benefit (typically transformers in good condition, less than 25 years old, and 300 kilo-volt-ampere (KVA) or larger), and for those transformers that are difficult or impossible to replace due to constraints with their physical location.

b. **Capacitors:**

(1) Establish an accurate inventory of high and low voltage capacitors based on manufacturing information. Large capacitors established to contain PCBs over 50 ppm shall be marked PCB contaminated, labeled with the sample ID number and concentration. Large capacitors established as not containing PCBs shall be marked non-PCB. PCB classification of each large capacitor shall be noted in activity records.

1 November 1994

(2) By October 1998, eliminate all large low and high voltage capacitors containing PCBs.

c. **PCB Elimination Plan.** All activities shall prepare a plan for the elimination of PCBs and PCB-contaminated material from all transformers, capacitors, and associated electrical equipment, systems, and hydraulic and lubricating fluids. The plan shall include the proposed date of removal and the requested source of funding for each PCB item. Transformer and capacitor owners shall prioritize corrective projects based on the severity of mission impact if a fire, explosion, or major PCB spill would occur and the likelihood of such an incident occurring. Transformer and capacitor owners shall coordinate priorities with impacted customers. Pay special attention to the redesign of the power grid to accommodate PCB removal. Activity PCB elimination plans shall be submitted to major claimants via the cognizant NAVFACENGCOM Environmental Field Division (EFD) for review and approval. PCB elimination plans shall be updated annually by 31 May until all regulatory requirements and Navy goals concerning the elimination of PCBs have been met.

d. **Funding:**

(1) Defense Business Operation Fund (DBOF) activities shall use DBOF funds for routine replacement of transformers and capacitors in their plant account, except when construction costs require the use of military construction (MILCON) funding.

(2) At non-DBOF activities, major claimants shall fund routine replacements of transformers and capacitors. Major claimants shall identify funding requirements and request any additional needed funds through the Program Objective Memorandum (POM) process.

(3) At both DBOF and non-DBOF activities, PCB transformer and capacitor replacements required by EPA regulation or that are in mission critical areas (i.e., where a spill/fire incident would result in the extended loss of essential facilities) are

eligible for environmental operations & maintenance, Navy (O&MN) project funds managed by major claimants.

(4) Activities shall fund testing of electrical equipment to determine PCB content.

e. **Procurement.** All future procurement of transformers or any other equipment containing dielectric or hydraulic fluid shall be accompanied by a manufacturer's certification that the equipment contains no detectable PCBs (less than 2 ppm) at the time of shipment. Such newly procured transformers and equipment shall have permanent labels affixed stating they are PCB-free (no detectable PCBs).

11-5.6 Training

a. Every person who repairs, maintains, replaces inventories or tests PCB, PCB contaminated, or suspected PCB articles and their immediate supervisors shall receive applicable NAVOSH Worker Right-to-Know Training on hazardous materials, shall receive job specific training on marking, inventorying, reporting, inspection, and spill reporting on PCBs, and shall receive job specific training regarding additional requirements specific to their installation. Training curriculum shall be tailored to include State and local PCB laws and regulations. Training records and documentation shall be maintained by each command as required by Federal, State, and local regulations.

b. Every person involved in PCB program management at Naval shore facilities shall receive general environmental overview training specified in Chapter 24 of this instruction, shall receive specific comprehensive training on Federal, State, and local PCB regulations related to their job assignment, and shall be familiar with the provisions of this chapter.

c. Environmental professionals at COMNAVFACENGCOM and EFDs/Engineering Field Activities (EFAs), Navy Regional Environmental Coordinators, major claimant and type commander environmental staffs, and legal environmental staff

1 November 1994

shall received general environmental overview training specified in Chapter 24 of this instruction, introductory or executive overview training in PCB management, and shall be familiar with the provisions of this chapter.

11-6 Responsibilities

11-6.1 COMNAVFACENGCOM shall:

a. Provide technical assistance to commands in complying with applicable Federal, State, and local PCB requirements.

b. Evaluate alternatives to the use of PCBs in existing PCB equipment transformers and provide such information to appropriate commands and activities.

c. Make necessary changes to facility design criteria and operating instructions to incorporate Federal, state and local regulations regarding PCBs and PCB items.

11-6.2 COMNAVSUPSYSCOM shall include provisions in inter-service support agreements (ISSAs) with DLA for DLA/DRMS/Defense Reutilization and Marketing Offices (DRMO) support of PCB requirements Navy-wide.

11-6.3 Chief, Naval Education and Training shall develop and provide training on the safety and occupational safety and health aspects of PCBs to applicable Navy personnel. Where possible, this training should be integrated into existing training.

11-6.4 Major claimants and subordinate commands shall:

a. Ensure compliance with applicable requirements, including PCB management at government-owned/contractor-operated (GOCO) facilities.

b. Ensure that all activities develop and implement PCB elimination plans, and that funding is programmed to meet the goals of the elimination

plans. Updates of PCB elimination plans shall be completed by 31 May of each year. At a minimum, funding shall be programmed to ensure compliance with all applicable regulations and Navy goals for elimination of PCBs.

c. Ensure that all activities have submitted to the claimant by 31 January a PCB annual report for the previous calendar year. The claimant shall review each report to ensure that it is complete, and forward to NFESC all activity PCB annual reports by 28 February.

11-6.5 Commanding officers of shore activities shall:

a. Comply with applicable Federal, State, and local PCB laws and regulations.

b. Sign and submit, as appropriate, reports and other required data to EPA, State, or local agencies.

c. Ensure the training of personnel involved in PCB operations per paragraph 11-5.6.

d. Transfer accountability and custody of PCBs and PCB items stored for disposal to DRMO, insofar as possible.

e. Handle, store, mark, inspect, and assess risks of PCBs and PCB items according to applicable Federal or State regulations. With regard to PCB transformers and PCB contaminated transformers:

(1) Inspect for PCB leaks

(2) Repair all leaks

(3) Maintain records

(4) Provide notification to EPA.

f. Inventory or validate all PCBs and PCB items annually per procedures required by regulatory agencies. Copies of the completed annual report shall be forwarded annually by 31 January to the major claimant, who is in turn responsible for forwarding

the report to NFESC by 28 February. Maintain records, for the life of the equipment (through disposal), for testing of PCB concentrations in hydraulic systems, heat transfer systems, and converted or reclassified transformers.

g. Report PCB spills or incidents involving combustion as prescribed in Chapter 10 when the spill exceeds the reportable quantities established in Federal regulations. Fire-related incidents involving PCB transformers shall be immediately reported to the NRC regardless of quantity.

h. Register all PCB transformers and equipment with cognizant fire departments as applicable.

i. Develop and implement a PCB elimination plan in compliance with Federal, State, and local PCB regulations. This plan shall be updated on an annual basis, with updated information being sent to the major claimant no later than 31 May each year.