

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL AND ENVIRONMENTAL COMPLIANCE**

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OVERVIEW

9.1 What is the purpose of this chapter? This chapter provides the requirements and guidance for using, storing, and disposing of Polychlorinated Biphenyls (PCBs) and PCB Items at U.S. Fish and Wildlife Service (Service) facilities.

9.2 What are PCBs? PCBs were manufactured in the United States from 1929 until they were banned in 1979. Widely used in dielectric fluids, hydraulic fluids, heat transfer fluids, adhesives, caulking, lubricants, paints, and plasticizers, PCBs' chemical stability, heat resistance, low flammability, and low electrical conductivity served industry well. Unfortunately, the chemical properties that made PCBs so attractive to industry are the same properties that make them a potential threat to health and the environment. PCBs decompose very slowly in the environment and accumulate up the food chain from phytoplankton to invertebrates, fish, and mammals.

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9.3 What is the Service policy on PCB management? Our policy is to:

- A.** Comply with applicable Federal, State, tribal, local, and Service-specific PCB regulations and requirements;
- B.** Protect human health and the environment from the potential hazards of PCBs; and
- C.** Reduce or eliminate the quantity of toxic and hazardous chemicals and materials we acquire, generate, use, and dispose of.

9.4 What is the scope of this chapter? This chapter applies to:

- A.** All Service-owned, leased, or operated facilities that generate, handle, store, transport, treat, and dispose of PCBs; and
- B.** Any special use permit, contract, lease, or concession agreement that could involve the use, handling, storage, transportation, treatment, and disposal of PCBs.

9.5 What are the authorities for this chapter?

- A.** Toxic Substances Control Act (TSCA) (15 U.S.C. 2605(e)).
- B.** Solid Waste Disposal Act (42 U.S.C. 6901, et. seq.).
- C.** Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601, et. seq.).
- D.** U.S. Environmental Protection Agency (EPA), Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761).
- E.** Occupational Safety and Health Administration (OSHA), Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).
- F.** U.S. Department of Transportation (DOT), Hazardous Materials Regulations (49 CFR 171-177).
- G.** DOT, Regulations on Specifications for Packagings (49 CFR 178).
- H.** Executive Order 12088, Federal Compliance with Pollution Control Standards.

9.6 Where might PCBs be found on your facility? Although PCBs are not common on Service facilities, following are some (but not all) items or applications that may contain PCBs.

- A.** Electrical distribution transformers, capacitors, voltage regulators, and circuit breakers may contain PCBs. See section 9.12 for a discussion of PCB concentration assumptions and read the nameplate on the equipment to help determine whether it contains PCBs. Electrical distribution equipment may belong to the electric utility serving your facility.
- B.** Applied dried paints, varnishes, sealants, caulking, adhesives, Galbestos (asbestos-protected metal), insulation, felt, or fabric products may contain PCBs. See section 9.17.

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C. Fluorescent light ballasts may contain PCBs (see section 9.18). If you are still uncertain if the fluorescent light ballasts at your facility contain PCBs after reading section 9.18, check with the manufacturer.

9.7 What terms do you need to know to understand this chapter?

A. Capacitor. A device for accumulating and holding a charge of electricity consisting of conducting surfaces separated by an electrical insulator (the dielectric). We talk about three types of capacitors in the chapter:

(1) *Large capacitors* contain 1.36 kg (3 lbs.) or more of dielectric fluid.

(2) *Small capacitors* contain less than 1.36 kg (3 lbs.) of dielectric fluid. Small capacitors are found in fluorescent light ballasts.

(3) *PCB Capacitors* contain 500 parts per million (ppm) or more of PCBs.

B. Certificate of Disposal. An industry-developed document normally used by PCB brokers and disposal companies to assure their customers that final disposal has taken place. Generators of the waste are required to maintain signed certificates of disposal.

C. Generator. Any person/organization who:

(1) Produces PCBs that are regulated for disposal under the PCB rules;

(2) Causes PCBs or PCB Items to become subject to the disposal requirements of the PCB rules; or

(3) Has physical control over the PCBs when the PCBs are no longer being used or stored for reuse, and they become subject to the disposal requirements in the PCB rules. Physical control means actual possession of the PCBs or PCB Items. For example, if the owner of a PCB Transformer sends it to a privately-owned transformer service shop, the transformer and any liquids removed by the service shop are under the physical control of the service shop. If the service shop sends the transformer or liquids for disposal, the service shop is the generator.

D. Manifest. A shipping document that EPA requires (EPA Form 8700–22, Uniform Hazardous Waste Manifest) and any continuation sheet attached to it that a generator originates and signs, and that the transporter and treatment or disposal facility uses to keep track of PCB waste.

E. Non-PCB Transformer. Any transformer that contains less than 50 ppm of PCBs. A transformer that has been converted from a PCB Transformer or a PCB-contaminated transformer cannot be classified as a non-PCB transformer until it has been reclassified in accordance with 40 CFR 761.30(a)(2)(v).

F. PCB Article. Any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. PCB Articles include capacitors, transformers, electric motors, pumps, and pipes.

G. PCB Article Container vs. PCB Container.

(1) A *PCB Article Container* is 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.

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(2) A *PCB Container* is a package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles, and whose surface(s) **has been in direct contact** with PCBs.

H. PCB Bulk Product Waste. Waste derived from manufactured products containing PCBs in a non-liquid state where the concentration at the time it's designated for disposal is 50 ppm of PCBs or greater. PCB bulk product waste includes, but is not limited to:

(1) Non-liquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs;

(2) Applied dried paints, varnishes, sealants, caulking, adhesives, Galbestos, insulation, felt, or fabric products; and

(3) Fluorescent light ballasts containing PCBs in the potting material.

I. PCB-Contaminated Electrical Equipment. Any electrical equipment including, but not limited to, transformers, capacitors, circuit breakers, reclosers, voltage regulators, switches, electromagnets, and cable that contains 50 ppm or greater, but less than 500 ppm of PCBs.

J. PCB Equipment. Any manufactured item, other than a PCB Container or a PCB Article Container, that contains a PCB Article or other PCB Equipment, such as microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

K. PCB Item. Any PCB Article, PCB Article Container, PCB Container, or PCB Equipment that deliberately or unintentionally contains or has as a part of it PCBs.

L. PCB Transformer. A transformer (a device that transfers electricity from one circuit to another) that contains 500 ppm of PCBs or greater.

M. Spill. Spills, leaks, and uncontrolled discharges (whether intentional or not) where the PCB concentration of the material spilled is 50 ppm or greater and the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases.

9.8 Who is responsible for administering the PCB management program? Table 9-1 describes the responsibilities of Service employees for the PCB management program.

Table 9-1: Responsibilities for the PCB management program	
These employees...	Are responsible for...
A. The Director	Approving policy for our PCB management program.
B. The Assistant Director – Business Management and Operations	Ensuring that the Service maintains an appropriate and effective PCB management program.
C. Directorate members	Ensuring that facilities within their Regions and Headquarters (HQ) fully implement the requirements of this chapter and Federal, State, tribal, and local regulations governing the storage, handling, and disposal of PCBs and PCB Items.
D. The Chief, Division of Engineering	<p>(1) Developing policy for the PCB management program;</p> <p>(2) Providing technical assistance to the Regional Engineers/Regional Environmental Compliance Coordinators</p>

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Table 9-1: Responsibilities for the PCB management program	
These employees...	Are responsible for...
	<p>(RENs/RECCs) as they develop and monitor PCB management programs in the Regions; and</p> <p>(3) Providing technical assistance to the Division of Safety and Health to minimize health risks from PCBs and PCB Items.</p>
E. The Chief, Division of Safety and Health	<p>(1) Assisting the Regional Safety Managers to minimize health risks from PCBs and PCB Items, and</p> <p>(2) Providing guidance to the Division of Engineering regarding health issues associated with managing PCBs.</p>
F. RENs/RECCs	<p>(1) Keeping current on Federal, State, tribal, and local regulations on the use, storage, and disposal of PCBs and PCB Items;</p> <p>(2) Coordinating with the General Services Administration (GSA) to manage PCBs in those facilities that GSA owns or leases;</p> <p>(3) Assisting Project Leaders/Facility Managers to develop their PCB management programs; and</p> <p>(4) Coordinating with Project Leaders/Facility Managers to assure that PCB spills are reported to the EPA, National Response Center, or State, when appropriate (see section 9.20).</p>
G. Regional Safety Managers	Guiding and assisting the RENs/RECCs and Project Leaders/Facility Managers with minimizing risk to human health associated with managing PCBs.
H. Project Leaders/Facility Managers	<p>(1) Developing and maintaining a PCB management program at the facility;</p> <p>(2) Arranging for qualified personnel to inspect facilities to determine the condition of equipment and items containing PCBs;</p> <p>(3) Ensuring proper handling, storing, labeling, recordkeeping, and disposal of items containing PCBs;</p> <p>(4) Identifying employees exposed or who may potentially be exposed to PCBs; and</p> <p>(5) Notifying appropriate officials when reportable PCB discharges or spills occur (see section 9.20 and 560 FW 3, Reporting Releases of Hazardous Substances, Oil Discharges, and Contaminated Sites).</p>

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Table 9-1: Responsibilities for the PCB management program	
These employees...	Are responsible for...
I. Employees	(1) Informing managers when they find PCBs or PCB Items and monitoring their condition, and (2) Wearing appropriate personal protective equipment when there is a risk of PCB exposure.

REQUIREMENTS

9.9 What are the PCB management program requirements? Each Region should develop and maintain a PCB management program to minimize the risk of PCB exposure and ensure proper disposal of PCBs and PCB Items. Project Leaders/Facility Managers should incorporate the Region's program into existing facility management programs. The following sections describe what Project Leaders/Facility Managers should know about PCB requirements and the elements of a PCB management program.

9.10 What should Project Leaders/Facility Managers know about Federal versus State, tribal, and local requirements when reading this chapter?

A. This chapter focuses on Federal (EPA) PCB regulations. State, tribal, and local regulations vary widely.

B. Some States regulate PCBs more stringently than the Federal requirements. The [EPA Web site](#) has information about which States and territories have the authority to do this. If they have the authority, these States may:

(1) Regulate PCBs under State hazardous waste regulations (see 561 FW 6);

(2) Regulate PCBs using lower concentration thresholds. In one State, for example, regulations are triggered for concentrations of 7 ppm of PCBs and not 50 ppm (the Federal threshold);

(3) Require shipments of PCBs to have separate State-specific manifest documents in addition to the Uniform Hazardous Waste Manifest;

(4) Require analysis to quantify the PCB concentration in all PCB Items;

(5) Require additional inspections of select PCB Items and specific disposal requirements for PCBs and PCB Items; or

(6) Require waste generators of PCBs and PCB Items to obtain disposal permits.

9.11 What are the requirements for PCB Item use and storage for reuse?

A. PCB use and storage requirements apply to those PCBs and PCB Items with PCB concentrations of 50 ppm or greater, including those that are assumed to be 50 ppm or greater.

B. Non-leaking PCB Transformers and large PCB Capacitors may remain in service for their useful life unless there is an exposure risk to food or animal feed.

C. We may store transformers or large capacitors containing PCBs at any concentration for reuse.

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- (1) Transformers or large capacitors stored for reuse that contain 50 ppm of PCBs or greater must be in suitable condition for reuse.
- (2) The regulations consider articles that are in storage for reuse to be "in-service."
- (3) Store large PCB Capacitors for reuse in a restricted access electrical substation or other restricted access indoor installation.
- (4) Do not use or store for reuse PCB Transformers or PCB Capacitors that pose an exposure risk to food or animal feed.
- (5) Articles not suitable for reuse are considered in storage for disposal. This is significant because items in storage for disposal must be disposed of within 1 year (see section 9.14).

9.12 What do the regulations say about assuming PCB concentrations?

A. Project Leaders/Facility Managers do not have to test Service-owned transformers to determine their PCB concentration unless the State requires it.

B. However, they should assume a transformer is a PCB Transformer (with PCBs at 500 ppm or more) if:

- (1) The nameplate indicates that the equipment contains PCBs,
- (2) There is any reason to believe that the equipment at one time contained PCBs, or
- (3) There is no nameplate or other information to indicate the type of dielectric fluid in the transformer.

C. Project Leaders/Facility Managers may assume that:

(1) Mineral oil-filled electrical equipment (other than circuit breakers, reclosers, and cable) with an unknown PCB concentration is PCB-Contaminated Electrical Equipment (50 to 499 ppm).

(2) Oil-filled circuit breakers, reclosers, and cable are not PCB-contaminated (i.e., they contain less than 50 ppm of PCB).

(3) Pole-top or pad-mounted distribution transformers:

(a) Manufactured after July 2, 1979 are not PCB-contaminated (i.e., they have less than 50 ppm of PCBs), or

(b) With an unknown manufacture date are PCB-Contaminated Electrical Equipment (i.e., 50-499 ppm of PCBs) unless they test them to determine otherwise.

D. The PCB concentration assumptions (40 CFR 761.2) apply only while the equipment is in use. At the time of disposal or if there is a spill, you must know the equipment's actual PCB concentration, by testing it if necessary.

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9.13 What are the inspection requirements for PCBs and PCB Items? Project Leaders/Facility Managers:

A. Must identify all locations on their facility that contain one or more Service-owned PCB Article, PCB Container, PCB Equipment, PCB Transformer, PCB Item, and PCB-Contaminated Electrical Equipment, including their condition and age. If the facility uses or stores at least 45 kilograms (99.4 lbs.) of PCBs, staff must maintain annual records and an annual document log in accordance with the PCB rules (see section 9.21).

B. Must inspect PCB Transformers as follows:

(1) For transformers that have 60,000 ppm of PCBs or more, inspect at least once every 3 months, with at least 30 days between inspections. The record of inspection for each PCB Transformer must contain its location; the date of the visual inspection; the name of the person inspecting it; the location of any leak(s); an estimate of the amount of dielectric fluid released due to any leak(s); the date and description of any cleanup, containment, repair, or replacement; and the results of any containment.

(2) For transformers with less than 60,000 ppm of PCBs or that have impervious, undrained, secondary containment capacity equal to at least 100% of the total dielectric fluid volume inside the containment, inspect at least once every 12 months.

(3) For a leaking PCB Transformer, inspect daily until it is repaired and the leak stops.

C. Do not have to record any inspections for large PCB Capacitors.

D. Must clean up ruptures, leaks, and other uncontrolled discharges from PCB Capacitors according to section 9.20 of this chapter.

E. Must check all PCB Items in storage at least once every 30 days, and

(1) Transfer any leaking PCB Items and their contents immediately to properly marked non-leaking containers, and

(2) Clean up any spilled or leaked materials immediately and dispose of it as PCB remediation waste (see section 9.20 and 40 CFR 761.61).

9.14 What are the requirements for storing PCB Items for disposal?

A. The Project Leader/Facility Manager must ensure the facility or area used to store PCBs and PCB Items intended for disposal is in compliance with 40 CFR 761.65(b)(1). The facility or area must:

(1) Have an adequate roof and walls to prevent rainwater from reaching the stored PCBs and PCB Items;

(2) Have a floor with continuous curbing that is at least 6 inches high. The floor and curbing must provide a containment volume equal to two times the internal volume of the largest PCB Article or PCB Container stored there, or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored there, whichever is greater;

(3) Have no drain valves, floor drains, expansion joints, sewer lines, or other openings that would allow liquids to flow from the curbed area;

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(4) Have floors and curbing constructed of continuous, smooth, and impervious materials to prevent or minimize penetration of PCBs;

(5) Be located at a site that is above the 100-year flood water elevation; and

(6) Be clearly marked with the large PCB label (see section 9.15 and Exhibit 1). Although regulations do not specify where to put the label, most inspectors interpret this requirement to mean the label must be apparent to visitors approaching the storage area. Do not put labels in areas that are normally not visible during an inspection (e.g., on a roll-up door).

B. If a portion of a building is being used as a PCB storage area, the Project Leader/Facility Manager must clearly mark and segregate that area from other areas and activities within the structure.

C. If the PCBs and PCB Items will be stored for fewer than 30 days, they may be stored in an area that does not comply with the storage area requirements in sections A and B above.

D. You can store nonleaking large PCB Capacitors and PCB-Contaminated Electrical Equipment removed from service that have not been drained of free-flowing dielectric fluid on pallets next to a storage area that complies with sections A and B above.

E. Containers used for storing PCBs must comply with the shipping container specifications in 40 CFR 761.65(c)(6) and (7).

F. Do not store combustible materials (e.g., paints, solvents, plastics, paper, wood) in a PCB Transformer enclosure or within 5 meters (approximately 16 feet) of a PCB Transformer enclosure or an unenclosed PCB Transformer.

G. Project Leaders/Facility Managers must ensure that all PCBs, PCB Articles, and PCB-Contaminated Electrical Equipment are dated when placed into storage for disposal and disposed of within 1 year. This means the entire disposal process (storage, transportation, incineration/landfill) must be completed within 1 year from the date the PCBs, PCB Articles, or PCB-Contaminated Electrical Equipment were put in storage for disposal.

H. The storage of small capacitors (e.g., ballasts) is not restricted unless they are leaking. If they are leaking, staff must put them in approved containers. They must put the PCB label on the containers and the date the first capacitor was placed in the container for disposal (see section 9.18 for more information on fluorescent light ballasts).

9.15 What are the requirements for marking PCB Items, storage areas, and transport vehicles?

A. Project Leaders/Facility Managers must ensure that staff mark the following items with the large (6"x6") PCB label shown in Exhibit 1:

(1) PCB Containers with PCBs in concentrations of 50 ppm or more;

(2) PCB Transformers;

(3) Large PCB Capacitors;

(4) Equipment containing a PCB Transformer or a large PCB Capacitor;

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(5) PCB Article Containers that have articles or equipment that must be marked;

(6) Each storage area used to store PCBs and PCB Items for disposal; and

(7) Transport vehicles loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of liquid PCBs at concentrations of at least 50 ppm or with one or more PCB Transformers. The vehicle must display the large label on each end and each side.

B. You can use a smaller label (called a "PCB mark") for articles too small to accommodate the larger label. Put PCB marks in a place that anyone inspecting or servicing the items can see.

C. You do not have to mark PCB-Contaminated Electrical Equipment. You may use a blue label to identify PCB-Contaminated Electrical Equipment or a green label to identify non-PCB equipment. Although not described in the regulations, these labels could be useful to categorize the equipment at the time of a leak, spill, storage, or disposal.

9.16 What are the requirements for shipping and disposing of PCBs and PCB Items?

A. The PCB disposal regulations are modeled after the "cradle-to-grave" tracking system for hazardous wastes established under the Resource Conservation and Recovery Act (RCRA). The tracking system consists of obtaining an EPA identification (ID) number, using Uniform Hazardous Waste Manifests that physically track the PCB wastes from the point of generation to the site of storage or disposal, receiving certificates of disposal from disposal facilities, and recordkeeping and reporting to complete the tracking system and facilitate enforcement of the PCB disposal regulations. See Chapter 561 FW 6, Hazardous Waste Management, for information on EPA ID numbers and hazardous waste manifests.

B. PCB Containers sent for disposal must be manifested for disposal using EPA's Uniform Hazardous Waste Manifest, except in States that have authorization to use their own hazardous waste manifests. The transporter must formally notify EPA of its PCB transportation activity and receive an EPA ID number. The Project Leader/Facility Manager must confirm that any commercial storers, transporters, and disposers they use for handling PCB waste have notified the EPA of their PCB waste activities. You will know this if the commercial storers, transporters, and disposers have an EPA ID number.

(1) All PCB Containers must be marked with the large yellow PCB label in Exhibit 1, which is available from most label companies.

(2) You must also mark the PCB Container with the name and address of the generator, the date they first leaked or otherwise were removed from service, and a description of the material (e.g., discarded lighting ballasts with small PCB Capacitors).

C. PCB Transformers designated for disposal must be drained of all free-flowing dielectric fluid, filled with a solvent, allowed to stand for at least 18 hours, and then drained thoroughly. The dielectric and flushed fluids must be incinerated in an EPA-approved PCB incinerator, and the solids (transformer carcass, coil windings, steel core, wood, paper, etc.) must go to an EPA-approved chemical waste landfill or a facility using an EPA-approved alternative disposal method. We recommend engaging an approved disposal firm or reputable electrical equipment servicing company to drain and flush PCB Transformers.

D. Large PCB Capacitors must be incinerated in an EPA-approved incinerator.

E. PCB-Contaminated Electrical Equipment (except large capacitors) must also be drained of all the free-flowing dielectric fluid prior to disposal. The fluid must be sent to an EPA-approved incinerator or high efficiency boiler. PCB-Contaminated Electrical Equipment with no free-flowing liquid must be disposed of:

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- (1) Using an EPA-approved decontamination method (see 40 CFR 761.79);
- (2) In an EPA-approved chemical waste or hazardous waste landfill;
- (3) In a facility permitted, licensed, or registered by a State to manage municipal solid waste subject to EPA's hazardous waste regulations; or
- (4) In a scrap metal recovery oven or smelter operating in compliance with 40 CFR 761.72.

F. Large capacitors that contain 50-499 ppm must be disposed of in an incinerator that complies with 40 CFR 761.70 or in a chemical waste landfill that complies with 40 CFR 761.75.

9.17 What should Project Leaders/Facility Managers know about PCBs and building demolition debris?

A. Some paints and caulks used in building construction from the 1950s through the 1970s contained PCBs. There is no regulatory requirement to test paint and caulk in use, but if you plan to dispose of building debris from this era, you should test it for PCBs. If it has PCB concentrations of 50 ppm or more, it is regulated for disposal. Immediately prior to demolition, take representative samples of the paint and caulk in or on the building to determine the PCB concentration. If the paint or caulk has PCB concentrations of 50 ppm or more, then that portion of the debris is called "PCB bulk product waste" and has to be disposed of in accordance with 40 CFR 761.62.

B. There are several options for disposing of PCB bulk product waste. The most practical (for large quantities of solid debris) and prudent (in terms of avoiding long-term liability) is disposal in a chemical waste landfill that EPA has approved for disposal of PCBs, or in a hazardous waste landfill either permitted by EPA or the State under Federal hazardous waste regulations.

C. If you dispose of PCB bulk product waste at a landfill not having a commercial PCB storage or disposal approval, at least 15 days before the shipment, you have to notify the facility receiving the waste in writing that the waste may include components containing PCBs greater than 50 ppm, and that the waste is known or presumed to leach less than 10 µg/L PCBs.

D. You must permanently maintain a written record of all sampling and analysis of PCB bulk product waste and notifications made to landfills.

E. Non-liquid building demolition debris, applied dried paints, varnishes, waxes or other similar coatings or sealants, caulking, and Galbestos may be sent for disposal to a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill. If you send the material to this type of landfill, you must ensure that it monitors for PCB releases, collects leachate, and cleans up any PCB releases in accordance with the PCB regulations (40 CFR 761.61).

F. Other PCB bulk product wastes (e.g., paper or felt gaskets contaminated by liquid PCBs) have more stringent sampling and disposal requirements (see 40 CFR 761.62).

9.18 What should Project Leaders/Facility Managers know about fluorescent light ballasts?

A. Fluorescent light ballasts frequently contain a small capacitor and a potting compound (a mixture of asphalt and sand) used to protect the capacitor. Some old small capacitors contain PCBs, and test data show that some old ballast potting compounds may contain low levels of PCBs in the asphalt.

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(1) It is likely that ballasts manufactured before July 1, 1979 contain PCBs.

(2) Manufacturers were required to mark fluorescent light ballasts manufactured between July 1, 1979 and July 1, 1998 with the statement, "No PCBs." You can treat ballasts with the "No PCBs" mark as unregulated for disposal.

(3) Otherwise, the PCB regulations do not create any assumptions about the PCB concentrations in fluorescent light ballasts. Ballasts manufactured after July 1, 1998 do not require marking, but are unlikely to contain PCBs.

(4) The best way to ascertain the PCB concentration of unmarked ballasts and small capacitors is to call the manufacturer with the make and model number.

B. Recycling is another alternative for disposal of intact (non-leaking) fluorescent light ballasts. More than 80 percent of a ballast is composed of solid recyclable material, such as copper wire and steel laminations. A combination of incineration and recycling removes and destroys PCB-containing material from lighting ballasts while preserving the remainder for recycling. To recycle, you must use an EPA-authorized recycler who recovers the metals while sending the PCBs for destruction in a high temperature incinerator.

C. Federal PCB regulations also allow disposal of intact and non-leaking PCB-containing ballasts in a sanitary landfill if the potting material in the ballast contains less than 50 ppm of PCBs. Some States have stricter regulations that prohibit disposal of any PCB-containing ballasts in sanitary landfills. Check with your State's environmental regulatory agency.

D. Leaking PCB-containing ballasts must be disposed of as PCB bulk product waste in an:

(1) EPA-approved chemical waste landfill that allows disposal of PCBs,

(2) EPA- or State-approved hazardous waste landfill, or

(3) EPA-approved high temperature incinerator.

E. Project Leaders/Facility Managers must ensure contractors clean up spills from leaking PCB-containing ballasts according to the EPA's PCB Spill Cleanup Policy (see section 9.20). Contractors must use trained personnel to clean up and dispose of leaking PCB-containing ballasts and any associated PCB cleanup materials (e.g., soil, rags, sorbent material, debris), and put them in the appropriate containers for disposal.

(1) The containers must display the PCB label and the date the first PCB Article or debris was placed in the container for disposal.

(2) For non-liquid PCBs, use a DOT Specification 5, Specification 5B, or Specification 17C container.

(3) If PCBs are in liquid form, the appropriate containers are DOT Specification 5 without removable head, Specification 5B without removable head, Specification 6D overpack with Specification 2S or 2SL polyethylene containers, or Specification 17E.

9. 19 What are the requirements for employee protection? Project Leaders/Facility Managers must:

A. Identify potential exposures and employees who may be exposed to PCBs on the job using a Job Hazard Assessment (see [240 FW 1, Exhibit 1](#)). PCBs are not very volatile, so it is unlikely that employees working around intact, non-leaking PCB Items would be exposed.

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B. Service policy prohibits on-site response to hazardous materials spills requiring personal protective equipment (PPE) above Level D (see [242 FW 6](#) for information on the site classification levels), unless written approval is obtained from the appropriate Directorate member.

9.20 What are the requirements for cleaning up PCB spills?

A. EPA's PCB Spill Cleanup Policy. EPA's spill policy requires cleanup of PCBs to different levels depending on spill location, the potential for exposure to residual PCBs remaining after cleanup, the concentration of PCBs initially spilled, and the nature and size of the population potentially at risk of exposure. You can find detailed information about cleanup, recordkeeping, and sampling requirements at 40 CFR 761.125 and 40 CFR 761.130. EPA's policy establishes four categories of PCB spills:

(1) Small, low-concentration spills are spills of materials containing 50-499 ppm of PCBs and that involve less than 1 pound of PCBs by weight, or less than 270 gallons of untested mineral oil.

(2) Large, low-concentration spills are spills of materials containing 50-499 ppm of PCBs and that involve 1 pound or more of PCBs by weight, or more than 270 gallons of untested mineral oil.

(3) High-concentration spills are spills of materials containing PCBs in concentrations of 500 ppm or greater in any quantity.

(4) Excluded spills are not spills that are excluded from the regulations, but instead are spills where you cannot automatically apply the EPA spill policy because of their significance. These are spills that result in the direct contamination of surface waters, sewers or sewage treatment plants, any private or public drinking water sources or distribution systems, animal grazing lands, or vegetable gardens. For these spills, the Project Leader/Facility Manager must contact the appropriate Regional EPA Office of Pesticides and Toxic Substances within 24 hours of discovery of the spill. EPA will establish cleanup standards and requirements for these spills on a case-by-case basis.

B. Service Personnel and PCB Spills. Employees may NOT respond to hazardous materials spills requiring PPE above Level D unless written approval is obtained from the appropriate Directorate member. The Service generally uses cleanup contractors to remediate PCB spills.

C. Notifying the Appropriate Officials. When notification is necessary, the Project Leader/Facility Manager should, whenever feasible, notify the Federal and State agencies required, as well as the Service's Regional Spill Coordinator and the RECC. If a Project Leader/Facility Manager is uncertain whether a spill constitutes a reportable incident, immediately seek guidance from the Regional Spill Coordinator or RECC. Notifications are required in the circumstances listed in Table 9-2.

Table 9-2: Notifications			
Report these spills...	To these officials...	This soon...	Comments
PCB spills of more than 1 pound (measured as the constituent of pure PCB by weight)	National Response Center (NRC) at 1-800-424-8802. (The NRC is a joint EPA and U.S. Coast Guard emergency	Within 24 hours	As an idea of measure, approximately 16 fluorescent light ballasts would have to leak completely to reach 1 pound of PCBs (1 ounce of PCB per ballast).

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Table 9-2: Notifications			
Report these spills...	To these officials...	This soon...	Comments
	response center.)		
PCB spills, 50 ppm or greater, that contaminate surface waters, sewers and sewage treatment plants, private or public drinking water sources, animal grazing lands, or vegetable gardens	EPA Regional Office PCB Coordinator	Within 24 hours	You can find a list of EPA Regional PCB Coordinators on EPA's PCB Web site .
PCB spills, 50 ppm or greater, involving 10 pounds or more by weight of PCBs (approximately 1 gallon of pure PCBs)	EPA Regional Office PCB Coordinator	Within 24 hours	See EPA's Web site .
A PCB Transformer involved in a fire	NRC at 1-800-424-8802 and to your RECC	Immediately	N/A
State-regulated PCB spills	State regulatory agency as required	As required	See section 9.10 and EPA's State program Web site .

D. Training Requirements.

(1) The Federal Occupational Safety and Health regulations (29 CFR 1910.120) require Hazardous Waste Operations and Emergency Response (HAZWOPER) training for workers engaged in cleanup, removal, or other activities that expose or potentially expose workers to hazardous substances and health hazards. HAZWOPER training is required only for personnel who engage in cleanup operations or supervise cleanup activities (see section 9.19).

(2) The PCB regulations require primary fire response personnel to recognize the PCB label and mark. Information on what it means when they encounter PCBs must be included in their firefighting training.

(3) Supervisors and managers should ensure that employees engaged in inspection, maintenance, and disposal of equipment and facilities receive awareness training covering the contents of this manual chapter, as applicable (see [231 FW 1](#), Continuous Learning).

9.21 What are the recordkeeping requirements for the Service's PCB management program? If a Project Leader/Facility Manager's facility stores at any time at least 45 kilograms (99.4 lbs.) of PCBs in a PCB Container(s), one or more PCB Transformers, or 50 or more large PCB Capacitors, he/she must develop and maintain annual records and a written annual document log recording the disposition of PCBs and PCB Items and maintain other written annual records (e.g., manifests). Both the annual document log and annual records must be maintained permanently.

A. Annual Document Log. The Project Leader/Facility Manager must prepare the annual document log by July 1 covering the previous calendar year (January through December). The annual document log must include:

(1) The name, address, EPA ID number of the facility, and calendar year.

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(2) The manifest number of every manifest the facility generated during the calendar year.

(3) For every PCB waste stored (whether manifested or not), its total weight in kilograms, the first date it was removed from service, the date it was transported off site for disposal, and the date of the disposal. Some waste requires additional information:

(a) *For PCB Articles*, the serial number (if available) or other means of identifying each PCB Article (e.g., transformer or capacitor);

(b) *For PCB Containers*, a unique number identifying each PCB Container and a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the material in kilograms in each PCB Container; and

(c) *For PCB Article Containers*, a unique number identifying each PCB Article Container and a description of the contents of each PCB Article Container (e.g., pipes, capacitors, ballasts).

(4) Total numbers for all the following for the calendar year:

(a) Number of articles by specific type of PCB Article and weight in kilograms of PCBs in all PCB Articles;

(b) Number of PCB Article Containers and weight in kilograms of the contents of all PCB Article Containers;

(c) Number of PCB Containers and weight in kilograms of the contents of all PCB Containers;

(d) Weight in kilograms of bulk PCB waste placed in storage for disposal or disposed of during the calendar year;

(e) Number of PCB Transformers and weight in kilograms of PCBs contained in the transformers remaining in service at the end of the calendar year;

(f) Number of large PCB Capacitors remaining in service at the end of the calendar year; and

(g) Weight in kilograms of any PCBs and PCB Items in PCB Containers, including the identification of container contents, remaining in service at the facility at the end of the calendar year.

(5) For any PCBs or PCB Item received from or shipped to another facility that the Service owns or operates, the information required under section A(3) above.

(6) A record of every telephone call or other means of verification (e.g., email) made to each designated commercial storer or disposer to confirm receipt of PCB waste transported to that storer/disposer by an independent transporter.

B. Annual Records. Annual records include the following:

(1) All signed manifests generated by the facility during the calendar year.

(2) All certificates of disposal that the facility received during the calendar year.

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(3) Records of inspections and cleanups performed in the storage for disposal area (40 CFR 761.65).

C. Availability. Make all PCB-related documents available for inspection at the facility during normal business hours (see 40 CFR 761.180).

/sgd/ Rowan W. Gould
DEPUTY DIRECTOR

Date: February 11, 2013