



Minnesota
Pollution
Control
Agency

PCB Spill Cleanup Policy

Hazardous Waste #4.48g, November 1998

All information in this fact sheet is a summary of information found in 40 CFR (Code of Federal Regulations), Part 761. Please note that since federal rules are subject to change, these fact sheets are subject to change also.

Polychlorinated biphenyls (PCBs) are a class of 209 man-made chemicals with varying toxicity, often used as an insulator in electrical equipment. PCB products range in consistency from thin, light-colored oils to yellow, viscous resins.

The use, storage and disposal of equipment containing PCBs is both state and federally regulated, depending upon the concentration of PCBs present. The U.S. Environmental Protection Agency (EPA), under the Toxic Substances Control Act (TSCA), regulates the use, storage and disposal of PCBs with concentrations of 50 parts per million (ppm) or more. The Minnesota Pollution Control Agency (MPCA) regulates the storage and disposal of PCBs with concentrations of 50 ppm or more when they become wastes.

PCBs are a problem because they are considered hazardous at concentrations of 50 ppm (parts per million) or greater. If spills occur, immediate action must be taken to

protect human health and the environment. Under the TSCA, the U.S. EPA and the MPCA manage spill response for PCBs. This fact sheet outlines the procedures involved.

DEFINITIONS

The following definitions are used in this fact sheet:

Double wash/rinse. Solid surfaces must be cleaned two times with an appropriate solvent or other material in which PCBs are at least 5% soluble by weight. The cleanser must cover the contaminated surface completely in both wash/rinses. The runoff must be contained and disposed of properly.

Low-concentration PCBs are PCBs with less than 500 ppm (parts per million).

High-concentration PCBs are PCBs with 500 or more ppm.

High-contact means a surface that is repeatedly touched, often for relatively long periods of time, such as doors, window sills, outdoor patios, sidewalks and manned machinery.

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Low-contact areas include interior ceilings, interior wall areas above six feet, roofs, vinyl siding, wood, utility poles, unmanned machinery and roadways.

SPILL CONDITIONS

The U.S. EPA defines a spill as an intentional or unintentional leak or other uncontrolled release of any quantity of PCBs with a concentration of 50 ppm or greater. "Spill boundaries" mean the actual area of soil (determined by pre-cleanup sampling) plus a one-foot buffer zone beyond the visible oil-staining.

The TSCA PCB Spill Cleanup Policy targets spills involving PCBs with concentrations of 50 ppm or greater, or spills containing more than one pound by weight of pure PCBs. The source of the spill must be used as the guideline for cleanup procedures.

Note: this policy went into effect on May 4, 1987. Releases of PCBs that occurred between Feb. 17, 1978 and May 4, 1987 are considered "existing spills" and are evaluated by the EPA on a site-by-site basis. Items containing PCBs that were placed in a landfill prior to Feb. 17, 1978 are not required to be removed for disposal by TSCA, but they may fall under other regulatory programs (such as Superfund). However, if PCBs are removed from the original disposal site, the PCB-contaminated material must then be disposed of as a TSCA waste.

**RESPONSE REQUIREMENTS:
LOW-CONCENTRATION SPILLS**

(Defined as less than 500 ppm PCB, or less than one pound of PCBs by weight, or less than 270 gallons of untested material.)

Spill response must be completed by the owner of the PCB equipment or the appropriate representative, such as the facility manager or foreman. (Wastes generated during the cleanup must also be disposed of under TSCA regulations.) When any spill involving 50 or more ppm PCBs occurs (including a spill assumed to contain 50 or more ppm PCBs), the

responsible party must complete the following actions within 48 hours.

Cleanup Requirements (Low-Concentration Spills)

Low-concentration spills require double wash/rinse for all contaminated surfaces (see definition on page 1).

A sample collection of smooth surfaces must be completed, using hexane wipe samples to detect PCB contamination. A standard wipe test verifies that the numerical surface standards of 10 micrograms per 100 square centimeters (10 ug/100 cm²) have not been exceeded. The minimum requirements for an appropriate wipe-testing protocol:

- A standard-size template (10 centimeters square) should be used to represent the area of cleanup.
- Use a gauze or steel wool pad saturated with hexane. (Hexane is very volatile; the wipe should be performed very quickly after the hexane is exposed to air.)
- All soil within the spill area, including a one-foot buffer around the area and visible traces of soil, must be excavated and filled with clean soil (less than 1 ppm PCBs).

The U.S. EPA retains the authority to mandate more stringent cleanup requirements in certain situations.

**RESPONSE REQUIREMENTS:
HIGH-CONCENTRATION SPILLS**

(Defined as 500 ppm or greater PCBs, or low-concentration spills involving more than one pound PCBs by weight, or more than 270 gallons of untested material.)

When a high-concentration spill occurs, the responsible party must complete the following actions



within 24 hours (or within 48 hours for spills involving PCB transformers):

- If the spill involves 10 pounds or more by weight of PCBs, notify the EPA's Region 5 Emergency Response Center at (312) 353-2318 and the National Response Center at (800) 424-8802.
- Notify the MPCA at (651) 296-6300 or (800) 657-3864 about any spills involving PCBs or PCB oils.
- If there is a fire, notify local authorities immediately.
- Restrict and label the visible spill area.
- Record and document the extent of PCB contamination of the estimated spill area.
- Begin cleanup of the visible spill area. Once the concentration level of the PCB spill is determined, begin the appropriate cleanup. Cleanup levels depend upon the release location, exposure risk, PCB concentration and future use of the site.

Cleanup Requirements (High-Concentration Spills)

Nonrestricted access areas include residential and commercial properties and rural areas, such as areas of low-density development and population in which access is uncontrolled by either man-made or naturally-occurring barriers (rough terrain, mountains, cliffs, etc.) The following are cleanup requirements for spills in nonrestricted access areas:

- For indoor and outdoor high-contact spills, use the 10 $\mu\text{g}/100\text{ cm}^2$ (micrograms per square centimeters) surface standard (see explanation of wipe test protocols on page 2).
- For outdoor low-contact spills, use 10 $\mu\text{g}/100\text{ cm}^2$.
- For PCB-contaminated soil, use a standard of 10 ppm. Excavate to a minimum of ten inches, and replace the excavated soil with clean soil (less than 1 ppm PCBs).

Restricted access areas (non-substation) include industrial facilities and extremely remote rural areas

that are at least 0.1 kilometer from a residential/commercial area, with access limited by man-made or naturally-occurring barriers. The following are cleanup requirements for spills in restricted access areas:

- For high-contact surface areas, use 10 $\mu\text{g}/100\text{ cm}^2$.
- For indoor low-contact surface areas, use 10 $\mu\text{g}/100\text{ cm}^2$.*
- For outdoor low-contact surface areas, use 100 $\mu\text{g}/100\text{ cm}^2$.
- For contaminated soil, use 25 ppm.

**Optional restrictive encasement can be used if approved by the EPA Region 5 Office.*

Outdoor electrical substations have the following cleanup requirements:

- For contaminated soil, use 25 ppm.
- For surfaces, use 100 $\mu\text{g}/100\text{ cm}^2$, or 50 ppm with EPA notification.

SPILL RECORD REQUIREMENTS

The following items are required on the PCB spill decontamination documentation record and must be retained for five years:

- Identification of spill source;
- Date and time the spill occurred;
- Date and time cleanup was completed;
- Brief description of spill location;
- Pre-cleanup sampling data used to establish spill boundaries;
- Brief description of solid surfaces cleaned and method used;
- Approximate depth of soil excavation and amount of soil removed; and
- Signed certification showing that the PCB cleanup requirements have been met.

SAMPLING REQUIREMENTS

(continued on next page)



A pre-cleanup sampling requires a statistically-based sampling scheme to identify the boundaries of the PCB spill if visible traces of spills are not evident (see "Cleanup Requirements" on page 2).

Post-cleanup sampling is required only to verify the level of cleanup for high- and low-concentration spills that exceed one pound pure PCBs or involve 270 gallons or more of untested mineral oil. The following conditions must be met during post-cleanup sampling:

- The sampling area must include a one-foot buffer, or an area 20% larger than the original area of PCB contamination.
- The sampling scheme must ensure 95% confidence against false positives, and must include calculations for variability due to analytical error.
- The number of samples must include areas of contamination within at least a two-foot radius of the spill. A minimum of three and a maximum of 40 samples must be collected.

The EPA recommends the use of two publications for additional information on sampling: *Verification of PCB Spill Cleanup By Sampling and Analysis*, and *Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup*. Both publications can be ordered through the TSCA Hotline shown below.

FOR MORE INFORMATION

The MPCA has a series of fact sheets available on the use, maintenance and disposal of equipment using PCBs, based on state and federal guidelines.

- Use and Servicing of Equipment Containing PCBs* (#4.48a)
- Labeling and Marking Requirements for Equipment Containing PCBs* (#4.48b)
- Storage and Disposal of PCB-Contaminated Equipment and Wastes* (#4.48c)
- Required Record Keeping for PCB-Contaminated Equipment and Wastes* (#4.48d)

- Manifest Requirements for Shipping PCB Wastes* (#4.48e)
- Managing PCBs in Fluorescent Light Ballasts* (#4.48f)
- PCB Spill Cleanup Policy* (#4.48g)

If you need further information, contact the MPCA at:

- (651) 296-6300
- (651) 282-5332 (TTY)
- (800) 657-3864 (Voice/TTY)

TSCA Hotline: (202) 554-1404