



# Responding to PCB Leaks and Spills

## Guidance for responding to PCB leaks and spills in Minnesota

### What are PCBs?

Polychlorinated biphenyls (PCBs) are not a single chemical, but a class of 209 synthetic compounds, often used as insulators in electrical equipment, such as transformers, capacitors and ballasts. PCBs also were used as plasticizers in caulking and as thermal stabilizers in hydraulic and lubricating fluids.

### Regulating PCBs

In Minnesota, PCBs are simultaneously subject to two sets of regulations:

1. The Federal Toxic Substance Control Act (TSCA) Regulations administered by the U.S Environmental Protection Agency (EPA)
2. The Minnesota Hazardous Waste Rules administered by the Minnesota Pollution Control Agency (MPCA)

For more information on identifying potential PCBs, required concentration assumptions, and the terminology used in this and other MPCA PCB fact sheets, visit the MPCA at <http://www.pca.state.mn.us/publications/w-hw4-48a.pdf> to view hazardous waste fact sheet #4.48a, [Identifying, Using, and Managing PCBs](#).

This fact sheet will provide guidance for cleaning up newly discovered spills. Contact the MPCA for clean-up requirements for sites contaminated by historic PCB use, disposal, or spills prior to 1987. You may not delay cleanup of new spills until you have received test results or by planning to perform a more extensive cleanup later.

If, in the future, you intend to use or sell a property on which a PCB spill has occurred, you may choose to perform your cleanup more stringently than the minimum requirements discussed in this fact sheet to ensure full value of the property.

### PCB leaks

A PCB leak is any situation in which a fluid known or assumed PCB or PCB-Contaminated oil is present on the exterior of equipment, but has not yet been released to the land or surface water. Examples of PCB leaks include:

- Untested mineral oil present on the outside of a transformer
- Gasket and valve seepages or weepages
- Incidents where leaked fluids have left the exterior of equipment but are fully captured by a secondary containment system and not released to land or surface water

An indication of a PCB leak is dirt in the area of bushings, gaskets, and valves that is sticking to the outside of an untested transformer (or other electrical equipment with unknown PCB concentration).

## PCB spills

A PCB spill is any situation in which a fluid known or assumed PCB or PCB-Contaminated has been released in any amount to land, surface water or an area where the public may be exposed, such as schools or vehicles.

## Reporting PCB leaks and spills

PCB leaks do not need to be reported to the MPCA or EPA; however, you must clean them up immediately upon discovery of the leak. Report PCB spills in the order listed in Table 1. You are responsible for reporting a PCB spill if you have any operational control of the source of the spill. You must call each number as indicated; calling one number will not notify the others.

**Table 1: Priority order for reporting PCB spills**

	Number to call	Who/when to notify
1 <sup>st</sup>	9-1-1	Immediately upon discovery of a PCB spill, call 9-1-1 to activate the local emergency response system if any response by police, fire department, or ambulance may be required.
2 <sup>nd</sup>	651-649-5451 or 1-800-422-0798	Immediately upon discovery of a PCB spill, call the Minnesota Duty Officer. (NOTE: A 9-1-1 call does not take the place of notifying the Duty Officer.)
3 <sup>rd</sup>	202-267-2675 or 1-800-424-8802	If the spill quantity is one pound of PCB compounds* or more, immediately upon discovery of the spill, call the EPA National Response Center. (NOTE: A call to the Minnesota Duty Officer does not take the place of this notification.)
4 <sup>th</sup>	312-353-2318	Within 24 hours of discovering the spill, call the EPA Region 5 Emergency Response Center if the spill exceeds 10 pounds of PCB compounds* OR is to any of the following: <ul style="list-style-type: none"><li>• A surface water, storm sewer, sanitary sewer or drinking water supply</li><li>• An animal grazing land (like a farm pasture)</li><li>• A vegetable garden</li></ul>

\*The weight of PCB compounds in a PCB spill may be estimated from a known or assumed PCB concentration:  
1 pound of PCB compounds = approximately 270 gallons of untested or known PCB-Contaminated (499 ppm) mineral oil  
= approximately 1 pint of PCB (at 650,000 ppm) askarel fluid

## Sampling and cleanup materials

Ensure that any employees or contractors who sample or clean up PCB leaks and spills are provided with and use appropriate personal protective equipment (PPE). For help determining appropriate PPE for your situation, contact the Minnesota Occupational Safety and Health Administration (MNOSHA). See *More information*, page five.

Use a solvent in which PCBs are at least 5% soluble by weight. The solvent you use must either be:

- approved by EPA or
- validated by you under the TSCA Regulations

Common approved solvents for PCB cleanups include hexane, kerosene, diesel fuel, and mineral oil.

## Cleaning up PCB leaks

Clean up all PCB leaks immediately upon your discovery of the leak. Immediately remove from service any equipment that is leaking because of permanent conditions, such as damage to the equipment or casing. You may not continue to use leaking equipment that potentially contains PCBs.

You may clean up leaks caused by temporary conditions without replacing the equipment if you double wash the equipment with an appropriate cleaning solvent and the PCBs in the equipment will remain

totally enclosed after the temporary condition has been corrected. Inspect the equipment periodically after the cleanup to ensure that the leak has permanently stopped.

Temporary conditions that may be cleaned without replacing equipment include:

- Minor weeps in transformer bushings or gaskets caused by unusually high ambient temperatures or temporary over-heating conditions in the equipment
- Seepage through valves caused by inadequate closure of otherwise properly functioning valves

Implementing periodic inspections and appropriate maintenance of your equipment may reduce your potential for PCB leaks and identify leaks before they become more costly spills.

## Cleaning up PCB-Contaminated mineral oil spills

Immediately begin cleaning up all spills potentially containing PCBs. You may not delay cleanup until you have received test results or by planning to perform a more extensive cleanup later.

If your spill involves less than 270 gallons of untested or known PCB-Contaminated mineral oil, follow the directions in this section.

If your spill involves 270 gallons or more of untested or known PCB-Contaminated mineral oil, or any amount of untested or known PCB askarel or other dielectric fluid, follow the requirements in the *Cleaning up PCB mineral oil and askarel spills* section.

Within 48 hours of discovering the spill:

- Collect all visibly spilled material
- Using an approved solvent, double wash and rinse all solid surfaces that will not be excavated
- Verify that potentially contaminated indoor residential solid surfaces have been cleaned to 10 micrograms per 100 square centimeters (10 $\mu$ g/100 cm<sup>2</sup>) of PCBs or less
- Excavate all visibly contaminated ground, including soil, asphalt, and unsealed concrete, plus an additional distance of one foot from the perimeter of the visible contamination
- Backfill the excavated area with clean material

## Cleaning up PCB mineral oil and askarel spills

*Askarel* is the generic name for non-flammable synthetic chlorinated hydrocarbons used for insulating media, most commonly consisting of PCBs in a mixture of tri- and tetrachlorobenzenes.

Within 24 hours of discovering the spill (within 48 hours if the source of the spill is a PCB Transformer):

- Cordon off and post the spill area at least three feet beyond the spill boundaries
- Document the spill boundaries
- Collect all visibly spilled material
- Begin to double wash and rinse all solid surfaces with an approved solvent
- Begin to excavate all visibly contaminated materials

Complete the cleanup promptly – within a reasonable period. There are three different cleanup standards based on the location of the spill. Verify you have met standards applicable to your location with post-cleanup sampling. The three location-based cleanup standards are:

1. Cleanup standards for secured outdoor electrical substations located at least 100 meters from residential or commercial areas:
  - Clean potentially contaminated solid surfaces to 100  $\mu$ g PCBs/100 cm<sup>2</sup> or less

- Clean potentially contaminated ground (soil, asphalt, unsealed concrete) to 25 parts per million (ppm) PCBs or less; or alternatively up to 50 ppm if you visibly label the area as contaminated)

The EPA may approve alternate standards if the cleanup would impair the substation operation.

2. Clean-up standards for other areas that are at least 100 meters from residential or commercial areas where access is restricted or limited by manmade or terrain barriers:

- Clean potentially contaminated indoor solid surfaces to 10 µg PCBs/100 cm<sup>2</sup> or less
- Clean potentially contaminated outdoor solid surfaces that are likely to be frequently touched by people to 10 µg PCBs/100 cm<sup>2</sup> or less (Surfaces include doors, the portion of walls six feet high down to the ground, stairs, sidewalks, and vehicles)
- Clean all other outdoor solid surfaces to 100 µg PCBs/100 cm<sup>2</sup> or less
- Clean potentially contaminated ground (soil, asphalt, and unsealed concrete) to 25 ppm PCBs or less

The EPA may approve alternate standards if the potentially contaminated areas are permanently encapsulated and visibly labeled.

3. Cleanup standards for all other areas:

- Dispose of all potentially contaminated household items
- Clean all potentially contaminated solid surfaces to 10 µg PCBs/100 cm<sup>2</sup> or less
- Excavate all visibly contaminated ground, including soil, asphalt, and unsealed concrete to a depth of at least 10 inches
- Clean potentially contaminated remaining ground to 10 ppm PCBs or less
- Backfill excavated areas with clean material after verification sampling is completed

The EPA may approve alternate standards if the potentially contaminated areas are permanently encapsulated and visibly labeled.

## Storage and disposal of cleanup materials

Store and dispose of cleanup materials according to the storage and disposal requirements that apply to the PCB-containing material that is the source of the spill. If you cannot determine the PCB concentration in the source, apply the assumptions in MPCA hazardous waste fact sheet #4.48a, [Identifying, Using, and Managing PCBs](http://www.pca.state.mn.us/publications/w-hw4-48a.pdf) at <http://www.pca.state.mn.us/publications/w-hw4-48a.pdf>.

For more information on storage of PCB-containing wastes, see MPCA hazardous waste fact sheet #4.48c, [Storing PCBs](http://www.pca.state.mn.us/publications/w-hw4-48c) at <http://www.pca.state.mn.us/publications/w-hw4-48c>.

For more information on disposal of PCB-containing wastes, see MPCA hazardous waste fact sheet #4.48d, [Manifest and Dispose of PCBs](http://www.pca.state.mn.us/publications/w-hw4-48d) at <http://www.pca.state.mn.us/publications/w-hw4-48d>.

## Recordkeeping requirements

Keep a record of all PCB spills and your response activities for five years from the date of the spill. Keep these records for each PCB spill cleanup you began, whether or not the spill was ultimately determined to contain PCBs.

Ensure your records include at least the:

- Source and location of the spill
- Estimated or known date and time of the spill
- Date and time you made applicable notifications to regulatory agencies

- Date and time spill cleanup was completed
- Description of the solid surfaces washed and the materials used to wash them
- Approximate depth and volume of ground excavated
- Post-cleanup sampling documentation for any concentration-based cleanup standard
- Signed certification by the responsible party that all cleanup requirements were met and that the information contained in the record is true to the best of their knowledge (This certification may not be signed by a cleanup contractor or consultant)
- Disposal documentation for all PCB-containing wastes generated by the cleanup

## Natural and manmade disasters

PCB leaks and spills are to be addressed immediately following discovery of the condition. However, if you operate an electrical power utility and a disaster interrupts power to customers, you may delay cleanup (only) until you restore power. You may not delay cleaning up PCB leaks or spills to avoid weekend work or overtime costs. Document the reason(s) for any delay in cleanup.

## More information

Guidance and requirements in this fact sheet were compiled from the Code of Federal Regulations, Chapter 40, Part 761; Minnesota Statutes, Chapters § 115A and §116; and Minnesota Rules, Chapter 7045; and incorporates regulatory interpretation decisions made by the MPCA on November 9, 2011. Visit the U.S. Government Printing Office at <http://www.gpo.gov/fdsys/> to review the Code of Federal Regulations directly. Visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs> to review the Minnesota Statutes and Rules.

The MPCA has staff available to answer waste management questions. For more information, contact your nearest MPCA regional staff. For information about waste reduction, contact the Minnesota Technical Assistance Program (MnTAP).

### Metro County Hazardous Waste Offices

Anoka .....	763-422-7093
Carver .....	952-361-1800
Dakota .....	952-891-7557
Hennepin .....	612-348-3777
Ramsey .....	651-266-1199
Scott .....	952-496-8475
Washington .....	651-430-6655
Websites .....	<a href="http://www.co.[county].mn.us">http://www.co.[county].mn.us</a>

### Minnesota Technical Assistance Program

Toll free .....	1-800-247-0015
Metro .....	612-624-1300
Website .....	<a href="http://www.mntap.umn.edu">http://www.mntap.umn.edu</a>

### Minnesota OSHA

Toll free .....	1-800-342-5354
Metro .....	612- 284-5005
Website .....	<a href="http://www.dli.mn.gov/mnosha.asp">http://www.dli.mn.gov/mnosha.asp</a>

### Minnesota Pollution Control Agency

Toll free (all offices) .....	1-800-657-3864
Brainerd .....	218-828-2492
Detroit Lakes .....	218-847-1519
Duluth .....	218-723-4660
Mankato .....	507-389-5977
Marshall .....	507-537-7146
Rochester .....	507-285-7343
St. Paul .....	651-296-6300
Willmar .....	320-214-3786
Website .....	<a href="http://www.pca.state.mn.us">http://www.pca.state.mn.us</a>

### Small Business Environmental Assistance

Toll free .....	1-800-657-3938
Metro .....	651-282-6143
Website .....	<a href="http://www.pca.state.mn.us/sbeap">http://www.pca.state.mn.us/sbeap</a>