

# HAZARDOUS SUBSTANCES: How to Comply with the Federal PCB Regulations



Polychlorinated biphenyls (PCBs) are industrial chemicals that were used in the manufacture of electrical equipment, heat exchangers, hydraulic systems and other specialized applications. PCBs pose a threat to the environment, particularly aquatic ecosystems, and human health. So the federal government barred the import, manufacture and sale of PCBs in Canada in 1977 and made the release of PCBs into the environment illegal in 1985. But owners of equipment containing PCBs were allowed to continue using that equipment until designated deadlines, some of which haven't passed yet. Thus, releases of PCBs through spills and fires continue to occur. We'll tell you why PCBs are so hazardous, how they're regulated in Canada and what you need to do to comply with the key federal law on PCBs.

According to Health Canada, PCBs were used widely as ingredients in many industrial materials, such as sealing and caulking compounds, cutting oils, inks and paint additives. They were also used to make coolants and lubricants for certain kinds of electrical equipment, such as transformers and capacitors.

PCBs can get into the environment through accidental releases, including fires. For example, during a fire:

- PCBs could be released in liquid form and then contaminate nearby soil or water;
- High temperatures in a fire could turn liquid PCBs into an aerosol form, which could be inhaled or transported somewhere else by air currents; or
- At high temperatures, PCBs can be turned into other, even more toxic substances called dioxins and furans.

One of the problems with PCBs is that once released, they persist in the environment due to their chemical stability. And they accumulate in the fatty tissue of living creatures, moving up the food chain. So birds that eat fish containing PCBs will have higher concentrations of PCBs than the fish. In fact, fish, birds and marine and fresh water invertebrates are especially sensitive to PCBs. Long-term exposure to PCBs can impact these animals' reproduction, cause cancer and have immunotoxic effects. Short- and long-term exposure to PCBs can also impact human health.

## THE LAW ON PCBs

Some provincial and territorial environmental laws address PCBs. For example, BC addresses waste containing PCBs in its hazardous waste laws, Manitoba covers these substances in its transportation of dangerous goods laws and Ontario has laws on the destruction of PCBs. But PCBs are primarily regulated through federal environmental law, which sets the minimum standards across the country. In fact, the landmark Supreme Court of Canada decision that upheld the federal government's authority to regulate on a national basis toxic substances that impact the environment involved the regulation of PCBs [*R v. Hydro-Québec*].

The main federal law on PCBs is the *PCB Regulations* issued under CEPA. The *PCB Regulations*, which took effect Sept. 5, 2008, cover four basic areas:

- General requirements;
- Ban on the release, manufacture, export, import, offer for sale, sale, processing and use of PCBs and products containing PCBs and exceptions to that ban;
- Storage requirements for PCBs and products containing PCBs and deadlines for the end of PCB storage; and
- Labelling, recordkeeping and reporting requirements for PCBs and products containing PCBs.

**Insider Says:** There are several other federal laws on PCBs. The *PCB Waste Export Regulations* bar the export of wastes containing PCB in a designated concentration to any country other than the US. The *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* regulate the import of waste containing PCBs in a specified concentration. And the *Federal Mobile PCB Treatment and Destruction Regulations* spell out the approval process required for treating and destroying PCBs on federal land.

## HOW TO COMPLY WITH PCB REGULATIONS

Here's an overview of the key aspects of the *PCB Regulations* you need to understand to ensure your company complies with them, if applicable.

### Application of the Regulations

The *PCB Regulations* apply to PCBs and products containing PCBs in any

concentration. They *don't* apply to:

- The export and import of PCBs that are hazardous waste or hazardous recyclable material under the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* or the export of PCBs that are waste under the *PCB Waste Export Regulations, 1996*;
- The sale, import or advertising of liquids containing PCBs for use in microscopy, including immersion oils but not including refractive index oils; and
- The offer for sale, sale and use of land contaminated with PCBs or with products containing PCBs.
- In terms of compliance, the *PCB Regulations* apply to those who:
  - Own PCBs or products containing PCBs;
  - Use, process, store, export or import PCBs or products containing PCBs;
  - Owners and operators of recycling, processing or destruction facilities for PCBs or products containing PCBs; and
  - Owners and operators of waste management companies for waste oils or other wastes containing PCBs.

Although all of the above groups must comply with regulations, the owners of PCBs in any concentration are ultimately responsible for ensuring that all regulatory requirements regarding their PCBs are fulfilled.

### **Prohibited Actions Involving PCBs**

Under the *PCB Regulations*, the following actions are prohibited:

**Release of PCBs.** The regulations bar the release of PCBs into the environment in a concentration of:

- 2 mg/kg or more for a liquid containing PCBs; or
- 50 mg/kg or more for a solid containing PCBs.

In addition, the regulations bar the release of more than one gram of PCBs into the environment from designated equipment. Releasing PCBs or PCB-contaminated substances can result in prosecution for an environmental violation—and serious penalties.

*Example:* Two companies starting excavating land that was contaminated with PCBs. During the excavation work near the shore of a bay, PCB-contaminated sediment was released into a wetland. The two companies and their president were convicted of environmental offences for the release and fined a total of \$659,000. The president was also sentenced to four months in prison [*R. v. James Sinclair, Thermosets Ltd. and Demolition and Recycling Inc.*]

If you *do* release PCBs into the environment, you must report the release. That report must contain the following information:

- The name, civic and mailing addresses and telephone number of the person who owns or has the charge, management or control of the PCBs that were released;
- The date, time and location of the release;
- A description of the source of the release; and
- The quantity in litres of liquids containing PCBs released, the quantity in kilograms of solids containing PCBs released and the concentration of PCBs

in the liquids and the solids that are released (in mg/kg).

**Manufacture, import, export, processing, use or sale of PCBs.** The regulations state that no one may:

- Manufacture, export or import PCBs or a product containing PCBs in a concentration of 2 mg/kg or more, including the unintentional manufacture of PCBs as a by-product of the manufacturing process for something else;
- Offer for sale or sell PCBs or a product containing PCBs in a concentration of 50 mg/kg or more; or
- Process or use PCBs or a product containing PCBs.

But there are exceptions to the above bans. For example, provided that certain conditions are met, the *PCB Regulations* do permit you to:

- Manufacture, export, import, offer for sale, sell, process and use PCBs or products containing PCBs for laboratory analysis;
- Offer for sale, sell, process or use PCBs or products containing PCBs for research purposes;
- Offer for sale, sell and use an electrical capacitor containing PCBs;
- Export, import, offer for sale, sell and use for transportation purposes aircraft, ships, trains and other vehicles that contain PCBs only in their communication, navigation or electronic control equipment or cables;
- Manufacture, export, import, offer for sale, sell, process and use a colouring pigment containing PCBs produced incidentally if the PCB concentration is less than 50 mg/kg and the annual average concentration of PCBs produced incidentally doesn't exceed 25 mg/kg;
- Process PCBs or products containing PCBs for the purpose of destroying or recovering PCBs; and
- Manufacture and use solid products containing PCBs in a concentration of less than 50 mg/kg using bulk solid products containing PCBs in a concentration of less than 50 mg/kg as long as the products are used for commercial or industrial purposes.

**Storage of PCBs.** The regulations required PCBs and products containing PCBs that weren't processed daily or used to either be sent for destruction to an authorized facility or stored at a PCB storage site. And it set deadlines for the storage of PCBs to end. As the last storage deadline has already expired, the storage of PCBs is now barred.

### **Use of Equipment Containing PCBs**

The *PCB Regulations* permit companies to continue to use cables, pipelines, electrical capacitors and other equipment containing PCBs that were already in use when the regulations took effect (Sept. 5, 2008) until specified deadlines:

- **Dec. 31, 2009:** For equipment containing 500 mg/kg or more of PCBs and equipment containing between 50 mg/kg and 500 mg/kg of PCBs that's located in a sensitive location, such as at or within 100 metres of a drinking water treatment plant, school or hospital. But companies could apply for extensions of this end-of-use deadline up to **Dec. 31, 2014**. (Note that the deadline for the extension application was Dec. 31, 2009.); and
- **Dec. 31, 2025:** For equipment containing between 50 mg/kg and 500 mg/kg of PCBs at all non-sensitive locations and for light ballasts and pole top transformers with auxiliary pole mounted equipment containing 50 mg/kg or

more of PCBs.

In addition, a person may continue to use a liquid containing 2 mg/kg or more of PCBs to service equipment containing PCBs.

### **Label, Reports and Recordkeeping Requirements**

The regulations spell out labelling, recordkeeping and reporting requirements:

**Labels.** The owner of equipment containing PCBs that's still permitted to be used and liquids containing PCBs used to service that equipment must attach a label in a readily visible location on the equipment or the container of liquid. If the equipment is too small for a label, such as a light ballast, affix the label to the container in which the equipment is stored. Labels are also required on cables, pipelines and their related equipment containing PCBs in a concentration of 50 mg/kg or more and on fixed tanks containing PCBs in a concentration of 50 mg/kg or more located at a transfer site or destruction facility.

The label must:

- Say "ATTENTION – contains 50 mg/kg or more of PCBs /contient 50 mg/kg ou plus de BPC" in black lettering on a white background, in a font size no smaller than 36 points;
- Measure at least 150 mm by 150 mm or at least 76 mm by 76 mm in the case of capacitors; and
- For equipment for which an extension of the Dec. 31, 2009 deadline was granted, a unique identification number.

**Recordkeeping.** The following persons must retain records demonstrating that they manufacture, process, use, sell, offer for sale, import or export PCBs or products containing PCBs in compliance with the *PCB Regulations*:

- The owner of the PCBs or products containing PCBs; and
- The person who's engaged in any of the above activities.

And the owner of equipment containing PCBs that's still permitted to be used must maintain inspection records regarding such equipment. You must maintain all records for at least five years from:

- The destruction of the PCBs or the products containing PCBs that are the subject of the record; or
- The completion of the activity involving PCBs or products containing PCBs.

**Reports.** Annual written reports summarizing the inventory of equipment containing PCBs still in use and progress towards end-of-use deadlines and elimination must be submitted to the federal Minister of Environment by:

- PCB owners for PCBs in use and in equipment for which an extension was granted; and
- Authorized transfer sites and destruction facilities.

Reports must also be submitted by anyone:

- Selling, processing or using PCBs for research;
- Manufacturing, importing or exporting colouring pigment containing PCBs; and

- Manufacturing solid products containing PCBs.

The content of the required reports varies. In general, you must submit them on or before March 31 of the year after the calendar year for which they were prepared. You may submit these reports in writing or through the PCB Online Reporting System. And you must retain copies of them for at least five years from the date of submission.

## **BOTTOM LINE**

If your company is still using equipment that contains PCBs, you should start phasing out their use by replacing them with equipment that doesn't contain PCBs. This process could be lengthy and there are no more extensions available for the end-of-use deadlines, which may come up faster than you think. In the meantime, make sure that the company properly labels equipment containing PCBs, retains the required records for the equipment and submits the required annual reports on it.

## **SHOW YOUR LAWYER**

*R v. Hydro-Québec*, [1997] 3 S.C.R. 213 (CanLII), Sept. 18, 1997

*R. v. James Sinclair, Thermosets Ltd. and Demolition and Recycling Inc.*, Ontario Govt. News Release, Dec. 4, 2008