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The *PCB Regulations* and Metal Recyclers and Hazardous Waste Service Providers

What are polychlorinated biphenyls?

Why are PCBs harmful?

PCBs are very persistent in the environment and in the living tissue of humans and animals. Scientific data suggests that they are probable human carcinogens and are toxic to fish at very low levels. If PCBs are burned in uncontrolled conditions, they produce dioxins and furans, which are highly carcinogenic compounds. Federal regulations were enacted to protect the health of Canadians and their environment, because of concern for the environmental and health effects of PCBs.

Polychlorinated biphenyls (PCBs) are synthetic compounds with stable chemical properties that were used mainly in electrical components until the 1970s. These properties made them ideally suited for applications that required durability and resistance to heat and light. They were never manufactured in Canada, but were widely used. The manufacture, process, import and offer for sale of PCBs have been prohibited in Canada since 1977. The *PCB Regulations* (the Regulations), which came into effect in 2008, implemented strict deadlines on equipment already in use and in storage, in order to accelerate the elimination of PCBs from the Canadian environment.

PCBs in electrical equipment are in oil form, and were used as an insulating fluid for transformers and capacitors, including fluorescent lamp ballasts. They were also added to paints, caulking, sealants and asphalt, since they did not corrode easily, were fire-resistant, and added flexibility when dried. Equipment containing PCBs is durable and may have a service life of 50 years or more. Large quantities of PCBs can be found in equipment still in use, placed in storage, and in products that were improperly disposed.

Do the Regulations affect me?

1. Are you a metal recycler that recycles lamp ballasts, transformers or other electrical equipment that may have contained PCBs or metal with PCB-contaminated paint?
2. Do you export metal waste for recycling?
3. Are you an authorized hazardous waste facility?

If you answered yes to any of the above questions, you may be subject to the Regulations.



Who is responsible?

Owners (i.e. the originator) of PCBs are legally responsible for their proper handling and disposal. Ownership cannot be transferred. The owner is responsible for the storage, labelling, destruction and reporting requirements under the Regulations. Transfer sites and destruction facilities are also responsible for ensuring proper storage, labelling, destruction and reporting requirements under the Regulations. Any person, including metal recyclers and hazardous waste companies, that causes a release of PCBs to the environment may be liable under the Regulations.

If PCB material is inadvertently brought into a metal recycling facility or hazardous waste facility, the owner of that facility may also be liable for clean-up, remediation, storage and disposal costs associated with PCB releases or contamination on the property. These facilities should have proper screening protocols in place to ensure that all material is properly identified.

Transportation of PCBs to a storage facility, transfer site and/or destruction facility can only be undertaken by a company authorized to transport hazardous waste in accordance with all federal, provincial and territorial requirements.

What can be recycled?

Removal and disposal of PCBs can only be undertaken by authorized hazardous waste service providers. PCBs must not be sent to a metal recycler for recycling. This includes transformers, capacitors and lamp ballasts that contain or may have contained PCBs. If you are unsure whether PCBs are present, the following precautions should be taken:

1. Waste oil – Only waste oil not containing PCBs (less than 2 ppm) should be sent for recycling. If waste oil contains PCBs it must be properly stored and destroyed according to the Regulations. If you are unsure whether PCBs are present, ask for a laboratory analysis before removing waste oil from property.
2. Equipment containing PCBs – If equipment previously contained PCBs, it must be decontaminated to less than 2 ppm and all PCBs removed before the carcass is sent for metal recycling.



How do I identify PCBs?

Identification of equipment containing PCBs such as transformers and capacitors depends on various conditions:

1. If the equipment was manufactured prior to 1982, it could contain PCBs.
2. Nameplate information: details manufacturer, amount and type of liquid and technical details. Type of liquid information varies among manufacturers, but one example is a Type Number that begins with an "L," which indicates the presence of Askarel (PCB oil). Check with the manufacturer if you are unsure.
3. Look for old Environment Canada labels that state "Attention PCB" or other labels stating that the equipment contains PCB.
4. Transformers may contain PCB liquids, PCB-contaminated mineral oil or mineral oil. If in doubt, sample and analyze. PCBs are widely used and found in a variety of locations. Transformers can be pad-mounted, pole-top mounted, in vaults or roof mounted, etc. Transformers that use a liquid coolant, or "wet" transformers, may contain PCBs. Dry-type transformers use air for cooling and do not contain PCBs. Once properly decontaminated, the transformer, carcass and core may be recycled.
5. Almost every capacitor manufactured since the 1930s and prior to 1982 was made with Askarel (common trade name for oil containing high concentration of PCBs), so it should be assumed that all capacitors contain PCBs unless the date of manufacture is known and/or it is clearly labelled non-PCB. Capacitors are found both inside and outside of buildings. Since capacitors have multiple applications, their size, shape and appearance may vary. They may be mounted on panels, in boxes, on walls or on floors, individually or in banks. Capacitors are usually sealed units and are sent for destruction, not recycled.
6. Light ballast capacitors are found in fluorescent light fixtures. Ballasts manufactured prior to 1982 likely contain PCBs. Under the Regulations, light ballasts may continue to be used until 2025; however, when they are removed, they are subject to the storage, labelling, destruction and reporting requirements of the Regulations. During retrofits, PCB-containing ballasts should be separated from non-PCB ballasts to ensure proper handling and disposal. Only non-PCB ballasts can be sent for metal recycling.



Can PCBs be exported or imported?

The *PCB Regulations* ban the export and import of PCBs in a concentration of 2 mg/kg or more if they are not captured by the *PCB Waste Export Regulations, 1996* or the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWHRM). The EIHWHRM allow the importation of hazardous wastes and hazardous recyclable material containing PCBs in a concentration of 50 mg/kg or more with a permit and other requirements. The *PCB Waste Export Regulations, 1996* prevent export of PCB wastes in a concentration of 50 mg/kg or more to any country except the United States and for the purpose of destruction only. However, the U.S. has banned the import of PCB wastes of concentrations of 2 mg/kg or more. PCB materials below 2 mg/kg can be exported to the U.S. and may be exported to other countries depending on legislation in the country of final destination. PCBs are listed in Schedule 3 of the *Canadian Environmental Protection Act, 1999* and their export, in any concentration, is also controlled by the Export of Substances on the *Export Control List Regulations*.

Please note that under the *Interprovincial Movement of Hazardous Waste Regulations* (the *Interprovincial Regulations*), there are no notification and permitting requirements for wastes moving within Canada. Consequently, wastes containing PCBs in a concentration greater than 50 mg/kg would not require notification or a permit for interprovincial movement. The *Interprovincial Regulations* require the use of a manifest (movement document) to track the movement of hazardous waste and hazardous recyclable material between provinces and/or territories.

For more information

PCB website: www.ec.gc.ca/bpc-pcb

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Tel.: 1-800-668-6767

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PNRCompliancePromotion@ec.gc.ca

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Tel.: 250-287-1866

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This material has been prepared for convenience of reference only and does not have an official character. For the purpose of interpreting and applying the regulations, users must consult the regulations on Justice Canada's website at www.laws-lois.justice.gc.ca.

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