

PCB DISPOSAL

PCB SITE DECOMMISSIONING

The ultimate goal of PCB owners is to have their PCB site listed as “historical” with the MOE. This means that the site number that was assigned to the Generator for a particular location is removed from the “active” site list and is identified as “inactive”. In order to accomplish this, PCB owners would have disposed of the PCBs they had in storage and ideally, no longer have any PCB equipment still in service at the site.

Decommissioning Storage Sites

The exercise of PCB site decommissioning is to provide proof to the MOE that there were no leaks or spills during the time the PCBs were kept in storage. It is incumbent on the PCB owner to prove that there are no significant PCB residues on the floor of storage containers or in storage rooms that could have resulted from leaking drums or equipment. Similarly, in cases of outdoor storage containers and PCB storage buildings, it must be proven that no fugitive PCBs escaped from the containment system of the storage container or building into the surrounding environment.

Sampling and Analysis

In order to generate the proof the MOE requires to decommission a site, wipe samples of the storage room floor and soil samples from around the container or building will be required. The criteria that must be met, depending on current or projected land uses, are outlined in the following table.

PCB Site Decommissioning Cleanup Criteria

Situation	Samples	Criteria*
In door storage room	wipes samples of floor	< 10 µg/100 cm ²
Outdoor storage container on concrete pad	wipe samples of container floor wipe samples of concrete	< 10 µg/100 cm ²
Outdoor storage container on soil (commercial-industrial)	wipe samples of container floor soil samples for direct PCB analysis	< 10 µg/100 cm ² < 25 mg/kg
Outdoor storage container on soil (residential)	wipe samples of container floor soil samples for direct PCB analysis	< 10 µg/100 cm ² < 5 mg/kg
Outdoor storage container on soil (agricultural)	wipe samples of container floor soil samples for direct PCB analysis	< 10 µg/100 cm ² < 0.5 mg/kg
Concrete Transformer pad	wipe samples of pad soil/gravel from substation	< 10 µg/100 cm ² < 25 mg/kg
Capacitor bank leak	wipe of floor and metal brackets	< 10 µg/100 cm ²

Storage Containers and Structures

PCB storage sites come in all shapes and sizes. The reader is referred to the “PCB Storage” PDF for more examples of the wide range of container types that were built for storing PCB wastes.

Some of the areas where PCBs have been stored include the following:

- 1) Modified ISO shipping containers



- 2) Specially-fabricated metal containers



- 3) Concrete containers



- 4) Transformer Substations



5) Large Metal Containers



6) Sprung Structures



7) Rooms in under ground parking garages



Wipe Test

The number of wipe samples for containers and storage building floors is based on the square footage of storage area. Typically at least 3 wipe samples are taken for statistical reliability even in small 2-drum containers. For larger containers and storage compounds, several wipe samples will be required.

If contamination is suspected in an area, rather than conduct a wipe test which will prove what is suspected, to reduce analytical costs, the surfaces in question should be thoroughly solvent washed before sampling. The wipe test involves using a solvent-soaked gauze to wipe the selected surface in an area 10 cm x 10 cm.

If a pre-fabricated template is not available, one can be fashioned out of cardboard or other suitable material simply by cutting out a 10 cm x 10 cm square.



Most surfaces sampled are either metal or epoxy-coated concrete, both of which are essentially impermeable to PCBs. Storage containers are wipe-tested following removal and disposal of PCB contents;



Floors and other surfaces are tested following spills or leaks of drums, transformers or other PCB contaminated equipment



Soil Samples

The number of soil samples taken around the perimeter of the storage units is directly related to the size of the storage facility. Obviously, the larger the site, the greater will be the costs of the “decommissioning” exercise.



Soil samples are taken from each side of a container, concrete container platform or transformer pad for a minimum of four samples for direct PCB analysis. A “composite” of the four samples is subjected to a “leachate test: and analyzed for PCBs, heavy metals and PAHs. Depending on the past land use, it may be necessary to analyze for pesticides or other target contaminants. If the MOE challenges the results or interpretation of the data provided, it will be necessary to justify sampling regimes, locations and target chemicals being analyzed.

If PCB residues on all tested surfaces are $< 10 \mu\text{g}/100 \text{ cm}^2$ and the PCBs are $< 25 \text{ mg}/\text{kg}$ in the environment (soil/, gravel, concrete, asphalt) in the immediate vicinity of the container, then an application to the MOE can be made to have the site listed as a “Historical” site.

The MOE requires that the letter from the PCB owner be accompanied by various supporting documentation including:

- copies of any manifests showing when the PCBs were removed
- copies of all “Certificates of Destruction” for the wastes
- the report showing the “Decommissioning” criteria have been met
- the laboratory’s “Certificate of Analysis”

NOTES:

- 1) If a PCB owner removes stored PCB wastes but still has PCB equipment in service, when the PCB equipment is removed, there is no need to reinstate the “PCB Site” registration if the PCBs are removed within 30 days of being taken out of service. However, it is the MOE’s preference that the application for listing a site as historical is done when all PCBs are out of service.
- 2) The fact that the PCB Site Decommissioning exercise verifies that there are no PCB residues in or around the storage area that exceed the MOE’s decommissioning criteria, it says nothing about the so-called environmental health of the rest of the property.
- 3) Metals such as laminations, copper coils, transformer tanks, etc. are wipe-tested following decontamination, prior to sending them to recycling facilities as non-PCB metal.

