

Basis of Design

The purpose of this section is to provide the guidelines for the development of specifications for proper cleanup and disposal of polychlorinated biphenyls (PCBs).

Overview

PCBs are very toxic and pose a long term liability to the UW. PCB-containing items are regulated strictly. Transformers, capacitors and bushings, along with contaminated soil and surfaces, must be managed carefully. Oil-filled electrical equipment must be replaced as part of capital improvement projects whenever feasible.

It should be assumed that any oil-filled electrical equipment (transformer or other electrical equipment) contains PCBs unless known otherwise. PCB concentrations must be determined in all oil-filled electrical equipment designated for disposal. The Washington State Department of Ecology regulates PCB wastes containing up to 50 ppm PCBs. EPA regulates PCB wastes of 50 ppm and greater. Both agencies have extensive requirements for management and disposal of PCB wastes. The UW also restricts the transporters and disposal facilities used for those wastes.

PCB encapsulation (Seattle campus)

There are several mechanical rooms on the Seattle campus where PCB floor and wall contamination has been encapsulated in place. EPA regulations require that encapsulated surfaces be marked with the yellow "Caution Contains PCBs" sticker typically used for labeling PCB transformers (>500 ppm PCBs). Signs posted inside these rooms warn against disturbing encapsulated surfaces without first contacting EH&S.

The following rooms have PCB contamination encapsulated in place: Haggett Hall North, G203 and South, G206; Health Sciences Building, B123A and D005; McCarty Hall, G021, G046, G056; Mechanical Engineering, B009; Power Plant, 027 and Terry Lander, TB003.

If drilling or other activity will disturb an encapsulated surface, you must submit a work plan to EH&S for review prior to the start of work. There is not a prohibition against drilling into encapsulated surfaces, but the work plan must show that proper precautions will prevent personnel exposure and further environmental contamination. Fax the work plan to 206.685.2915. For assistance, contact at the PCB Coordinator at 206.616.5837.

Non-Restricted Access Areas (Seattle campus)

There are multiple mechanical rooms and electrical vaults on the Seattle campus that contain oil-filled transformers. These locations are typically referred to as "Non-Restricted Access Areas." A significant number of these transformers have PCB contaminated oil. There is no surface contamination, but there are still many regulatory requirements such as signage, inspections and maintenance.

For any construction activity at these locations, review the existing analytical data or plan on obtaining an environmental contractor for a sampling survey. A work plan must be submitted to EH&S for review and comment. The work plan must show that proper precautions will prevent personnel exposure and further contamination. Fax the work plan to 206.685.2915. For assistance, contact at the PCB Coordinator at 206.616.5837.

Transformer replacement (Seattle campus)

A key component of the PCB management program is to ensure that once an oil-filled transformer has reached its life expectancy that it is removed from service and replaced with non-PCB containing

equipment. All PCB contamination is removed. Higher priority is given to units with high levels of PCBs and other maintenance issues. A work plan must be submitted for review and comment prior to the start of any project. The plan must show that proper precautions will prevent personnel exposure and further contamination. It must also follow current regulatory guidelines. For assistance, contact EPO at 206.616.5837.

Other equipment containing PCBs

Other types of older oil-filled electrical equipment must be removed and/or replaced whenever feasible and disposed of properly through EH&S. Examples of items include old x-ray machines and other large older laboratory equipment that contain power sources, power generators and capacitors, as well as fluorescent light ballasts. If you have any questions, please call 206.616.5837.

Records and reports

EH&S maintains all mandatory PCB regulatory records. Projects involving remediation or transformer replacements are managed by the Capital Projects office, with significant coordination from EH&S. EH&S routinely reports to the EPA the progress of the PCB program with status update letters and annual reports.