

APPENDIX 9

POLYCHLORINATED BIPHENYLS (PCB) WASTE MANAGEMENT PLAN

Program Overview and General Information

1. Purpose/Background

The use, storage, and disposal of PCB's are regulated by the Environmental Protection Agency (EPA) under the Toxic Control Substance Act (TSCA) and 40 CFR, Part 761.

Polychlorinated Biphenyls were widely used as a fire retardant and insulator in the manufacture of transformers and capacitors. This was due to their ability to withstand exceptionally high temperatures. Because of their classification as a human carcinogen, the EPA banned their use in 1979. The exception would be their regulated use in R&D research. Transformers and capacitors, which were manufactured prior to 1979 found at Rutgers University, contain oil, which may contain certain levels (ppm) of PCB's. Therefore, all oil -filled equipment must be disposed of through REHS. Because of their highly regulated use and disposal, all oils from transformers /power supplies need to be sampled by REHS prior to disposal of the oil and the carcass. Oil filled transformers and capacitors can be found as separate units or in laboratory equipment at the university such as:

- X-ray Generating Devices
- Medical X-ray Units

In addition, contaminated oil with PCB's may be found in:

- Old high voltage power supplies (transformers)
- Vacuum pumps.

PCB's can also be found in fluorescent light ballasts. These are managed and sent off site for recycling through the Facilities/Maintenance departments with universal waste at each of the campus locations.

2. Definitions

CFR - Code of Federal Regulations

PCB- Polychlorinated Biphenyls

TSCA -Toxic Substance Control Act

Non-PCB Transformer - any transformer that contains oil/dielectric fluid less than 50 ppm PCB

PCB Contaminated Electrical Equipment - any electrical equipment, including but not limited to, transformers that contains PCB's at concentrations greater than or equal to 50 ppm and < 500 ppm in the contaminating fluid (oil).

PCB Transformer- any transformer that contains greater than or equal to 500 ppm PCB.

Capacitor - a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric (oil).

PPM - Parts per Million (mg/l)

3. Generator/User Responsibilities

It is the responsibility of the generator or user of oil filled equipment to contact REHS @ 732-445-2550 prior to disposal of the equipment. Types of common equipment that could contain oil can be referenced in Section A. An REHS representative will then evaluate the equipment and make a determination if any

sampling prior to disposal is necessary. (Details on these requirements can be found in the Facilities/Maintenance PCB Management Procedure section of this document)

4. Laboratory Researcher Responsibilities

The researcher is responsible for notifying REHS prior to the use of PCB's in their lab.

(Details on these requirements can be found in the Laboratory PCB Management Procedure section of this document)

5. REHS Responsibilities

REHS has the responsibility to determine if sampling of equipment is necessary prior to disposal. If so, REHS will provide the sampling and submittal of the sample to a certified lab for analysis. Once the sample results are received, REHS will setup the proper disposal of the equipment. In addition, REHS is responsible for maintaining all appropriate documentation. This includes manifests, certificates of disposal, PCB annual document logs, transformer inventory, and all sample analysis results. REHS is responsible to conduct periodic assessments of PCB practices at the University. This includes yearly inspections of laboratories that use PCBs.

LABORATORY PCB MANAGEMENT PROCEDURE

1. Prior Notification

Any laboratory researcher that plans to use any amounts of PCB's in their lab must contact REHS at 732-445-2550 prior to their use. An REHS representative will then set up an appointment to discuss the precautions and safeguards with the lab PI.

2. Provide Protocols

Each lab that uses PCB's must submit a summary of their research with PCB's to REHS. The summary must include an inventory of the specific PCB items stored in the lab as well as the levels of the PCB's which are stored in the lab.

3. Laboratory Storage Requirements

Laboratory must meet the following storage requirements:

- All PCB items in the lab are to be stored in secondary containment. This includes PCB items stored in refrigerators.
- If PCB items in storage contain PCB levels of 50 ppm or greater, the storage container/area must be marked with the PCB label. These are available from REHS.
- If any PCB items used in the lab contain PCB levels of 50 ppm or greater, the door(s) to the lab must be marked (posted) with the PCB label. These are available from REHS.

4. Disposal/Request Waste Pickup

All requests for PCB laboratory waste can be completed by using the Hazardous Waste Disposal form which can be [accessed here](#) or by faxing the form to REHS at 732-445-3109.