



Disposal Options for X-Ray Machines

Technical Guidance Document SW-1998-G3

The purpose of this technical guidance document is to provide information regarding the proper disposal of x-ray equipment that may contain polychlorinated biphenyls (PCBs), a chemical that was a common constituent of dielectric fluids produced before 1979. PCBs are regulated by the U.S. Environmental Protection Agency under the federal Toxic Substances Control Act (TSCA). The regulations are contained in Chapter 40 of the Code of Federal Regulations, Part 761.

X-ray machines manufactured before 1979 may contain PCBs in their power supply transformers. Before disposing of these machines they must be tested for PCB content. It is the responsibility of the equipment owner to have this analysis performed before disposal. The concentration of PCBs detected in the analytical results will determine how the unit may be disposed.

- If the analytical results show the machine contains oil contaminated with less than 50 parts per million (ppm) PCBs the machine is considered "Non-PCB" and could be disposed of, after the oil is drained, as municipal solid waste or recycled as scrap metal. Oil with less than 2 ppm PCBs could be disposed of in the same way as used motor oil; oil containing between 2 and 49 ppm PCBs are not regulated by TSCA but the use of this oil is prohibited.
- If the machine's transformer oil contains between 50 and 499 ppm PCBs, the machine is considered to be "PCB Contaminated". The machine could be disposed of in the same manner as the "Non-PCB" unit described in the first example. However, the oil that is drained from the transformer must be disposed of at a PCB disposal facility.
- If the transformer oil contains 500 or greater ppm PCBs the transformer must be disposed of according to the requirements of 40 CFR, Part 761. This would require shipping the unit to a PCB disposal facility. The entire x-ray machine may have to be disposed of in this manner if the transformer cannot be removed from the machine without spilling PCBs.

If you have further questions concerning the testing or disposal of PCBs please contact the U.S. Environmental Protection Agency's Region VII office at (913) 551-7518 or the Kansas Department of Health and Environment's Bureau of Waste Management at (785) 296-1600.

For additional information regarding the proper management of solid or hazardous waste in Kansas, you may visit the Bureau of Waste Management website at <http://www.kdheks.gov/waste/> or contact the Bureau at: (785) 296-1600, bwm_web@kdheks.gov, or the address at the top of this document.
