



Mercury-Containing Equipment is Universal Waste

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Hazardous Waste Program

This fact sheet is intended to provide an overview of the new rule that adds Mercury-Containing Equipment (MCE) to the list of universal wastes.

What Is “Mercury-Containing Equipment” (MCE)?

MCE means a device or part of a device (excluding batteries and lamps) that contains elemental mercury integral to its function. Some commonly recognized devices are thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches, such as light switches in automobiles.

This definition does not include mercury waste that is generated as a by-product through the process of manufacturing or treatment, or equipment that has been contaminated by mercury.

Why Is Mercury-Containing Equipment Being Included Under the Universal Waste Rule?

Elemental mercury volatilizes at ambient temperatures and can be dispersed widely through the air and transported thousands of miles, accumulating in plants, animals, and humans as it travels. Once released, mercury persists in the environment. Once mercury enters water, biological processes transform it to methyl-mercury, a highly toxic substance that bioaccumulates in fish and animals that eat fish. Exposure to high levels of mercury has been linked to serious nervous system and developmental problems in humans.

Adding spent MCE to the universal waste rule will encourage mercury recovery and improved, safe management of mercury waste. The addition will also encourage more facilities to consolidate mercury waste as well as reduce emissions from mercury. Before we adopted the MCE universal waste rule, we considered MCE to be byproducts that were not regulated when recycled. However, since adopting the MCE universal waste rule we defined used mercury-containing equipment that is taken out of service as “spent material” which is regulated when recycled.

The universal waste rule allows consolidation of MCE at central locations, which makes it easier for smaller users to arrange for hazardous waste management of these materials when they are generated. For example, under the universal waste rule, a fire station, community center, or retail store could participate in MCE collection programs without having to get a RCRA permit, as they would be required to under full subtitle C regulations.

Who Is Affected By This Rule?

Any person who generates, transports, treats, recycles, or disposes of MCE; including people who manage household hazardous waste when it is commingled with VSQG, SQG or LQG hazardous wastes.

Requirements for SQHUW and LQHUW

Small quantity and large quantity handlers of universal waste (SQHUW and LQHUW, respectively) must place mercury-containing equipment that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container.

Containers must be:

- Closed
- Structurally sound
- Compatible with the contents
- Lack evidence of leakage, spillage, or damage that could cause leakage
- Reasonably designed to prevent the escape of mercury by volatilization or any other means
- Labeled or marked clearly with any of the following phrases: "Universal Waste- Mercury-containing Equipment," or "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

Mercury-Containing Equipment

MCE consists of five broad groups that each have specific management requirements. These five groups are:

- Whole spent equipment with an ampule (like in thermostats)
- Whole spent equipment with open end tube/housing (such as a barometer or manometer)
- Removed ampule
- Removed open end tube/housing
- Parts with mercury in them (e.g., valves)

A SQHUW or LQHUW may remove MCE ampules from universal waste MCE, provided the handler:

- Removes and manages the ampules in a manner designed to prevent breakage;
- Removes the ampules only over or in a containment device;
- Ensures that a mercury clean-up system is readily available to immediately transfer any spilled mercury to a container that meets the requirements;
- Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements;
- Ensures that the area in which ampules are removed is well ventilated and monitored (OSHA compliant);
- Ensures that employees are thoroughly familiar with proper mercury waste handling and emergency procedures;
- Stores removed ampules in closed, non-leaking containers that are in good condition; and
- Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling and transportation.

SQHUW & LQHUW may remove the open end tube/housing holding the mercury of a MCE (such as a barometer or manometer) provided the handler:

- Immediately seals the tube/housing holding the mercury with an air-tight seal to prevent the release of any mercury; and
- Follows all requirements for removing ampules and managing removed ampules (as described above).

A SQHUW and LQHUW who handles mercury-containing ampules from MCE or seals mercury-containing tube/housing must determine whether the following exhibit a characteristic of hazardous waste:

- Mercury or clean-up residues resulting from spills; and/or
- Other waste generated as a result of the removal of mercury-containing ampules or tubes/housings.

If the mercury residues and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with the hazardous waste rules.

Once the mercury ampules, tubes and or housing have been removed from the equipment, the elemental mercury may be managed as a recyclable scrap metal. Once the mercury is removed from the equipment, it is no longer a universal waste. The remaining equipment must be evaluated to determine how it should be managed. If the equipment is metal that can be recycled, then it can be managed as a scrap metal. If the remaining equipment would not meet the scrap metal exclusion and it has a characteristic of a hazardous waste, it would need to be managed as a hazardous waste. If the remaining equipment would not meet the scrap metal exclusion and it does not contain any hazardous waste characteristics it could then be managed as a solid waste.

Contact

If you have questions that aren't answered in this guidance, please contact the Hazardous Waste Compliance Assurance Section of the [Division of Environmental Response and Revitalization](#) at 614-644-2924.