



Management of Universal Waste

Technical Guidance

This technical guidance document describes some of the basic requirements for handlers of universal waste (UW). Universal waste is a subset of hazardous waste and contains mercury, lead, cadmium, copper and other substances hazardous to human and environmental health. Universal wastes are generated from a wide variety of sources (i.e., individuals, government agencies, hospitals, businesses, etc.) in a variety of settings, not just in traditional industrial settings. These wastes are referred to as *universal* because, at some point, almost every business, non-profit organization, and government agency generates them.

Goals of the Universal Waste Regulations

The universal waste regulations were developed with several interrelated goals in mind:

- To encourage the recycling of the categories of wastes designated as universal waste.
- To improve the management of certain types of hazardous wastes.
- To reduce the amount of hazardous waste that ends up in solid waste landfills and combustors.
- To ease the regulatory burden on the facilities that manage these wastes, particularly by allowing more time for accumulation of these wastes in order to facilitate appropriate recycling or disposal.
- To ensure that these wastes go to appropriate treatment or recycling facilities.

Categories of Universal Waste

Certain widely-generated hazardous wastes have been designated as universal waste. Managing qualifying hazardous wastes as universal waste is optional. Generators have the choice to manage hazardous wastes that fit into the categories of universal waste under the streamlined requirements of [40 CFR 273](#) instead of the more stringent RCRA Subtitle C requirements for hazardous waste. UW includes:

- **Hazardous waste batteries** – devices consisting of one or more electrically connected electrochemical cells designed to receive, store and deliver electric energy. Includes nickel cadmium batteries and lead acid batteries.

- **Certain hazardous waste pesticides** – substances that are intended for preventing or mitigating pests or intended for use as a plant regulator or defoliant. Excludes animal drugs and animal feed containing animal drugs.
- **Mercury-containing equipment** – devices that contain elemental mercury integral to their function. Includes thermostats, but does not include batteries or lamps.
- **Hazardous waste lamps** - bulbs or the tube portion of electric lighting devices that are specifically designed to produce radiant energy. Includes mercury vapor lamps, fluorescent light bulbs, and neon lights.

The applicability of the universal waste requirements to each category of waste described above can be found in [40 CFR Part 273 Subpart A](#).

Universal wastes that are mixed with hazardous wastes are fully regulated as hazardous wastes. Mixtures of universal waste and very small quantity generator waste or household hazardous waste can be managed under the universal waste requirements since these hazardous waste are not subject to full hazardous waste regulation.

Wastes that are not Universal Wastes

- **Non-hazardous batteries:** Batteries that are not hazardous at the time of disposal need not be managed as UW. Non-hazardous batteries include alkaline, carbon zinc, chloride zinc (commonly labeled *heavy duty*), nickel metal hydride (NiMH), zinc air, and lithium batteries

that are nine volts or less and higher voltage lithium batteries that have been discharged to less than one volt. Although non-hazardous, you are still encouraged to recycle them.

- **Electronic waste:** Circuit boards and cathode ray tubes (CRTs).
- **PCB-containing ballasts and small capacitors:** Lighting ballasts and small capacitors that may contain PCBs that are found in motors and appliances.

Advantages of Managing Hazardous Wastes as UW

- Universal waste volume is not included when determining hazardous waste generator status. This may benefit some companies by allowing them to reduce their generator status level which in turn would reduce their generator regulatory requirements.
- Universal waste can be accumulated for up to one year which is a longer accumulation time than allowed for small quantity and large quantity generators of hazardous waste.
- Less labeling is required on universal waste.
- A hazardous waste manifest is not required to accompany a universal waste shipment in Arizona or within any other state that recognizes it as universal waste.
- Less recordkeeping is required.
- A shipment of universal waste can be transported via a universal waste transporter rather than a hazardous waste transporter.

Universal Waste Handler Requirements

The universal waste regulations create two groups of generators of universal waste, called handlers, based on the amount of universal waste accumulated on-site. Universal waste handlers are not just those that generate or produce universal waste, but also those who receive universal waste from other handlers. Below is a description of the two universal waste handler groups – Small Quantity Handlers of Universal Waste and Large Quantity Handlers of Universal Waste and the main requirements each must comply with. A full description of handler requirements can be found in 40 CFR Part 273 [Subpart B](#) and [Subpart C](#).

Small Quantity Handlers of Universal Waste - accumulate less than 5,000 kilograms (or about 11,000 pounds) of universal waste at any one time on-site. SQHUWs must comply with the following:

- Label or mark universal waste to identify the type of universal waste it is (See [40 CFR 273.14](#)).
- Manage universal waste in a way that prevents releases to the environment.
- Immediately respond to releases of universal waste and properly manage released waste.
- Distribute basic waste handling and emergency information to their employees to ensure that their staff is aware of these procedures.
- Accumulate universal waste for no more than one year.
- Comply with export requirements for foreign shipments.

SQHUWs are not required to notify PDEQ of their universal waste management activities, not required to keep records of universal waste shipments, and not required to use a hazardous waste manifest for off-site shipments of universal waste. However, PDEQ recommends keeping records of universal waste management as a best management practice (BMP). Handlers must comply with U.S. DOT hazardous materials requirements, if applicable.

Large Quantity Handlers of Universal Waste -

accumulate on-site 5,000 kilograms or more of universal waste at any one time. The designation as a LQHUUW is retained for the remainder of the calendar year in which the 5,000-kg threshold was exceeded, and may be reevaluated in the following calendar year. Handlers must comply with the following:

- Label or mark universal waste to identify the type of universal waste (See [40 CFR 273.34](#)).
- Manage universal waste in a way that prevents releases to the environment.
- Immediately respond to releases of universal waste and properly managed released waste.

- Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures relative to their responsibilities during normal facility operations and emergencies.
- Accumulate universal waste for no more than one year.
- Comply with export requirements for foreign shipments.
- Notify PDEQ and obtain an EPA identification number from ADEQ if they do not already have one.
- Maintain records of all universal waste shipments received by and sent from the facility and retain these records for three years.

Handlers are not required to use a hazardous waste manifest for off-site shipments of universal waste, but must comply with U.S. DOT hazardous materials requirements, if applicable.

Waste Specific Management Requirements

Each type of universal waste has specific management requirements designed to prevent releases to the environment that handlers must comply with. These standards can be found in [40 CFR Section 273.13](#) for SQHUWs and [Section 273.33](#) for LQHUWs. Additionally, these sections discuss those activities that universal waste handlers can perform under the universal waste regulations such as ampule removal from mercury containing equipment and mixing or discharging batteries and what standards they have to follow in order to do them.

For additional information regarding proper management of solid or hazardous waste in Pima County, you may contact the Pima County Department of Environmental Quality (PDEQ) at (520) 724-7400, at the address at the beginning of this document, or visit the PDEQ website at <http://www.deq.pima.gov/waste/index.html>.

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