

# UNIVERSAL WASTE

## KU Procedures for the Management of:

- Fluorescent Lamps and many other bulbs,
- Batteries,
- Mercury-Containing Equipment (MCE) including Thermostats, and
- Pesticides



## PURPOSE

This document was written to help you comply with the regulations administered by the Kansas Department of Health and Environment (KDHE). It lays out specific rules that must be followed to safely, responsibly and properly manage certain waste as “universal waste”. Some of the information in this document you may already be doing and some material may be new to you.

## EMPLOYEE TRAINING

All employees who handle or manage universal wastes must be trained to do so in compliance with the universal waste rules. KU-EHS has provided this content to serve that purpose. Supervisors are responsible for keeping training documentation within their unit.

## LEGAL BACKGROUND

EPA issued the universal waste rule with three objectives: 1) to reduce the amount of hazardous waste being improperly disposed, 2) to encourage recycling and proper disposal of lamps, batteries, pesticides, and mercury containing devices, and 3) to reduce the regulatory burden on businesses that generate these wastes.

The universal waste rule replaces the hazardous waste rules with provisions that are simplified, more easily understood, and somewhat less stringent. The two most beneficial of these differences, as they apply to the University of Kansas, is: 1) these wastes can be kept on-site for longer periods of time - up to one year rather than the usual 90-day limit with hazardous waste, and 2) more than one container for each type of waste may be used.

## TYPES OF UNIVERSAL WASTE

The universal waste regulations apply to four types of specific wastes: lamps, batteries, mercury-containing devices, and pesticides. If the previous four specific wastes are determined to be a hazardous waste by the generator (handler), they may be managed within the relaxed “universal waste” management standards. Alternatively, these materials may be managed in compliance with the more stringent hazardous waste regulations in 40 CFR 260-268.

All universal wastes must be managed in a way that prevents releases to the environment. Containers must remain closed and be structurally sound; compatible with the waste; and sufficient to prevent damage or breakage. Any containers that show evidence of leaks, spills, or damage must be repackaged. Each container or device must be dated with a start date.

### Universal Waste Lamps

A Universal Waste lamp is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infrared regions of the electromagnetic spectrum (40CFR 273.9). These bulbs may include fluorescent, high-intensity discharge, mercury vapor, neon, metal halide, and high-pressure sodium lamps.

#### Required Lamp Management & Labeling

- Containers must remain closed – no open box flaps
- The label or marking on the outer container must read – “**Universal Waste - Lamp(s)**”
- Separate lamps by types - do not mix types in one container.
- Immediately clean up and containerize any broken lamps. These can no longer be managed as universal waste. Label this container with the Hazardous Materials label found on the EHS website and contact us for disposal. <https://ehs.ku.edu/hazardous-materialswaste-pickup-request>

### Universal Waste – Lamps

Date Started \_\_\_\_\_

Notify EHS (864-2853) to pick up  
within 9 months of date started.

## Universal Waste Batteries

The standard defines a battery as a device, consisting of one or more electrically connected electrochemical cells, which is designed to receive, store, and deliver electric energy. This definition includes lead-acid batteries, but it does not impact the regulatory exclusion applicable to lead-acid batteries when they are returned to a battery manufacturer for reclamation (40 CFR 261.6). This definition also includes an intact, unbroken battery from which the electrolyte has been removed.

### Management & Labeling

- Each individual battery must be labeled, or
- Batteries must be in a labeled closable secondary container, and
- Containers must remain closed
- The label or marking on the outer container must read – **“Universal Waste - Battery(ies)”**
- Tape over the terminals to guard against fire
- Immediately clean up and containerize any damaged or leaking batteries. These can no longer be managed as universal waste. Label this container with the Hazardous Materials label found on the EHS website and contact us for disposal.

## Universal Waste – Batteries

Date Started \_\_\_\_\_

Notify EHS (864-2853) to pick up  
within 9 months of date started.

## Universal Waste Mercury-Containing Equipment

Mercury-containing equipment (MCE) is defined as a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function. If the mercury is in the device accidentally, or if the device has been contaminated by an external source of mercury, the device may not be managed as universal waste.

### Management & Labeling

- Do not attempt to remove the mercury from the device
- Containers must remain closed
- The label or marking on the outer container must read – “**Universal Waste - Mercury-Containing Equipment**”
- Be sure containers are designed to prevent the escape of mercury into the environment (i.e. secondary containment).

## Universal Waste – Mercury-Containing Equipment

Date Started \_\_\_\_\_

Notify EHS (864-2853) to pick up within 9 months of date started.

## Universal Waste Pesticides

The universal waste regulations cover pesticides when they are recalled under the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Pesticides are regulated as a universal waste only when they have been determined to qualify as solid waste. Unused pesticides that are to be disposed of, incinerated, or burned for energy recovery are considered universal waste. Unused pesticides that are to be reformulated or reclaimed and pesticides managed by farmers in accordance with 40 CFR262.70 are not considered universal waste.

### Management & Labeling

- Containers must remain closed
- The label or marking on the outer container must read – **“Universal Waste - Pesticide(s)”**

## Universal Waste – Pesticide(s)

Date Started \_\_\_\_\_

Notify EHS (864-2853) to pick up within 9 months of date started.

## PROHIBITIONS

Do not throw out any universal wastes unless you have EHS permission in writing. All handlers of universal waste are prohibited from disposing, diluting, or treating universal waste. There are some exceptions to this, but the EHS department will need to be involved in those cases.

## STORAGE TIME LIMITS

Universal waste may only be kept one year. We must be able to demonstrate the length of time that the universal waste has been accumulated. Therefore, a date must be placed on each container or device with the earliest date that any universal waste was placed in it. In order to allow time for EHS to ship the waste off-campus, please contact us for pickup within **nine months** of the start date.

## RESPONSE TO RELEASES

Spills and broken lamps must be cleaned up immediately. You may clean up small spills yourself if you have the materials available. EHS can help you put together a spill kit designed specifically for your area. For larger spills, contact EHS immediately for assistance.

## WASTE REDUCTION

Whenever possible, those responsible for ordering materials should seek out products that are less hazardous. For example, buy lamps with lower mercury content (eco-labeled or green tipped).

## SUMMARY

The most important points to take away from this document are:

- Keep all containers closed.
- Clean up leaks and spills as they occur.
- Label all waste containers with the specific wording from above.
- Call EHS for assistance or questions at 864-2853.

## Q & A

### **1. Who needs to be trained under the Universal Waste regulations?**

You do, if you generate Universal Waste, if you package Universal Waste, if you prepare Universal Waste for shipment, if you manage Universal Waste activities, or if you transport Universal Waste. This includes students, Facilities Services and Housekeeping, and Hazardous Waste Handlers.

### **2. My shop uses rechargeable NiCd batteries for drills and other power equipment. Are these batteries universal waste? How should they be collected?**

Yes, and they should be collected and picked up by EHS.

### **3. When does a mercury-containing lamp become a waste?**

A used mercury-containing lamp becomes a waste on the date the generator/handler permanently removes it from its fixture. An unused mercury-containing lamp becomes a waste on the date the handler decides to discard it.

### **4. Are fluorescent bulbs or lamps the only types of lamps that are classified as universal waste?**

No, other lamps include High intensity discharge (HID), Sodium vapor, Metal halide, some automobile and floodlights

### **5. What should I do if I find that we are approaching the one year limit for universal wastes?**

Contact EHS immediately so that we can pick them up and request a special disposal pickup from our off-site vendor. We have them come to campus at least every three months for all types of hazardous waste. In the future, make sure to contact us within nine months to give us sufficient time for disposal.

### **6. Do we need a sticker label to attach onto a Universal Waste container?**

No, it can be handwritten with the waste description and accumulation start date.