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MANAGING YOUR UNIVERSAL WASTE PROPERLY

Universal wastes are hazardous wastes that are regulated by 40 CFR Part 273. Universal wastes include; **batteries, pesticides, mercury containing equipment, and lamps**. A Small Quantity Handler of Universal Waste (SQHUW) maintains less than 5000 kg (11,023 lbs) of waste on site at any time. A Large Quantity Handler of Universal Waste (LQHUW) maintains 5000 kg or more of universal waste on site at any time. All handlers of universal waste must follow a set of rules to comply with 40 CFR Part 273, in addition to state specific rules.

1. Containers used to store universal waste must be structurally sound, **closed**, compatible with the contents of the container, and in good condition.
2. **Label** the containers to identify the type of universal waste.
 - a. Batteries can be marked "Universal Waste – Batteries", "Waste Batteries", or "Used Batteries".
 - b. Pesticides can be marked "Universal Waste – Pesticides", or "Waste Pesticides".
 - c. Mercury containing equipment can be marked "Universal Waste – Mercury Containing Equipment", "Waste Mercury Containing Equipment", or "Used Mercury Containing Equipment".
 - d. Mercury thermostats can be marked "Universal Waste—Mercury Thermostats," "Waste Mercury Thermostats," or "Used Mercury Thermostats."
 - e. Lamps can be marked "Universal Waste—Lamps," or "Waste Lamps," or "Used Lamps".
3. A generator may accumulate universal waste for no longer than **one year** from the date the universal waste is generated.
4. A generator must be able to demonstrate the length of time a waste has been in storage by labeling containers with the **earliest date** that universal waste in the container became a waste, or by **maintaining a log** that shows the earliest date each waste was accumulated.

Some best practices for the storage of universal wastes are to set aside an accumulation area specifically for these wastes, inspect containers regularly to make sure they are closed and structurally sound, monitor the earliest date a material became a waste to ensure disposal within the one year time limit, and maintain certificates of recycling from the receiving facility.



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To help you implement these best practices, the following items are included in this kit:

- **Storage and packaging guidelines for common universal waste streams**
- **Signs to post in the designated universal waste accumulation area**
- **Universal waste labels**
- **Universal waste log**

STORAGE AND PACKAGING GUIDELINES

Batteries

- Low or non-mercury containing alkaline and carbon zinc batteries can be recycled or disposed of as non-hazardous solid wastes.
- For **sealed lead acid, nickel-cadmium, lithium ion, mercuric oxide, silver oxide, and other alkaline batteries**, the following recommendations apply:
 - Store batteries in a safe, leak-proof container in a secure location
 - Label each container of batteries with the earliest date a battery was discarded
 - Make sure cells are discharged
 - Package batteries so terminals will not come into contact with each other (insulate the terminals with tape)

***Note:** It is okay to mix different types of batteries in the same container as long as the casings are intact and not leaking or broken. Batteries that do not fit this description should be packaged individually to protect the casings of other batteries from leaking electrolyte.*

Lamps

- Newer bulbs, such as green end and compact fluorescents may be managed as non-hazardous solid wastes. It is highly recommended that businesses recycle these lamps. However, if they are disposed, businesses must maintain information to show that they are not hazardous waste.
- Place bulbs in containers that the replacement bulbs came in unless another container is provided. Make sure the container remains closed while in storage.
- Mark the earliest date the bulbs were placed in storage on the container and keep a record to document the one year storage limit.

***Note:** Crushing bulbs can release mercury into the air and expose employees to mercury inhalation.*



Mercury Containing Equipment

- Examples of mercury containing equipment include **electrical relays or switches, thermometers, thermocouples, gauges, barometers** and other devices containing **elemental mercury**. Handlers of this type of universal waste need to:
 - Ensure the waste is recycled
 - Ensure that containers are closed, structurally sound and compatible with the contents
 - Mark the earliest date the waste was accumulated in the container, and keep a record to document the one year storage limit.

Note: *Mercury that has been spilled, along with clean up materials and residues is not managed as universal waste, but rather hazardous waste.*

Pesticides

- Pesticides can be managed as universal wastes as long as the following conditions are met:
 - It has been recalled under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), or is not in compliance with FIFRA
 - It is part of a collection and management program recognized by the state or federal regulatory agency.
- There are some important steps to know in storing and packaging pesticides:
 - They must be stored in a waste container that is compatible
 - They must be labeled with the original label and the words “Universal Waste-Pesticides” or “Waste Pesticides”
 - They must be stored on an impervious surface (concrete or asphalt without cracks or holes)
 - They cannot be stored in areas with functional floor drains unless secondary containment is present. Secondary containers must be large enough to hold the contents of the largest container.



OTHER NOTES

The following table outlines the differences between SQHUWs and LQHUWs.

	SQHUU	LQHUU
Quantity	Accumulate <5000 kg (11,023 lbs) on site at any one time	Accumulate >5000kg (11,023lbs) on site at any one time
EPA ID Number	Not required	Required
Limit of Accumulation	4999 kg (11,022 lbs)	No limit
Storage Time Limit	One year	One year
Manifest	Not required	Not required, but must keep basic shipping records
Personnel Training	Basic training	Basic training geared toward employee responsibilities

SQHUUs may distribute this paper to employees who will be responsible for handling and storing universal waste in order to meet the training requirement.

LQHUUs need to provide job specific training for employees who handle universal waste.

UNIVERSAL
WASTE

CONTENTS _____

ACCUMULATION START DATE _____

SHIPPER _____

ADDRESS _____

CITY, STATE, ZIP _____



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UNIVERSAL WASTE LOG

Periodic Inspection Form

Waste Description	Date Inspected	No. of Containers	Containers Labeled?	Accumulation Date(s)	Visible Leaks?	Terminals Taped?
Mixed Batteries						
Alkaline Batteries						
Ni-Cad Batteries						
Lead Acid Batteries						
Lithium Ion Batteries						
Mercuric Oxide Batteries						
Silver Oxide Batteries						
Miscellaneous Fluorescents					NA	NA
4 ft. Fluorescents					NA	NA
8 ft. Fluorescents					NA	NA
U-Shaped Fluorescents					NA	NA
HID Bulbs					NA	NA
Compact Fluorescents					NA	NA
High Pressure Sodium Vapor					NA	NA
Mercury Thermometers						NA
Mercury Switches/Relays						NA
Mercury Gauges						NA
Other Mercury equipment						NA
Recalled Pesticides						NA



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