

Universal Waste – Annual Generator Training



Office of Environmental Health & Safety

www.uah.edu/OEHS

Special thanks to UWM for sharing training materials

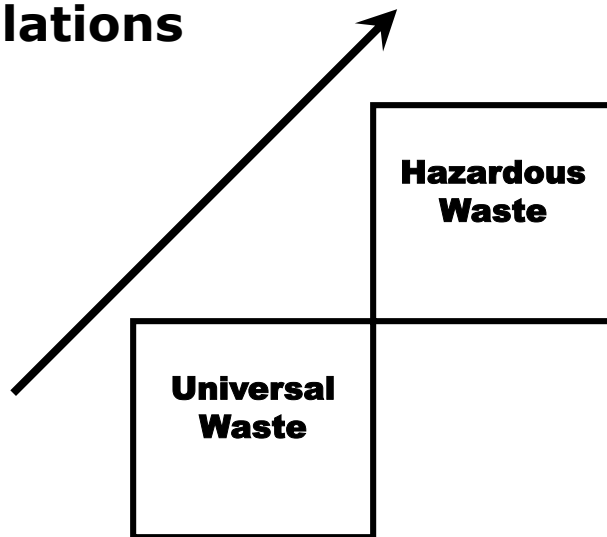
Annual Requirement

According to **Universal Waste Management Standards** (ADEM Administrative Code 335-14-11), a small quantity handler (UAH) of Universal Waste shall inform employees of the proper handling and emergency procedures appropriate to the types of waste handled.

What is Universal Waste?

Universal Waste is a regulatory step **below** Hazardous Waste

Regulations



- Reduced requirement from hazardous waste management
- Have one year to ship out Universal waste
- Items must be properly marked and dated

Recognizing a Universal Waste

The follow items are considered Universal waste:

- Batteries
- Lamps
- Thermostats (mercury-containing equipment)
- Pesticides



Waste Batteries

Universal waste batteries include:

- Nickel-Cadmium (Ni-Cd)
- Nickel Metal Hydride (Ni-MH)
- Lithium and Lithium Ion (Li-ion)
- Lead Acid and Lead Gel Cells

UAH recycles all used batteries on campus, except Alkaline. Landfills do accept alkaline batteries, and they should be tossed in the normal trash.

Waste Batteries

- Tape the terminals of batteries, whenever possible
 - Especially Lithium batteries
 - Prolonged contact between Li batteries will generate heat, and possibly a fire.
- If you notice a damaged or leaking battery
 - Wear appropriate PPE (gloves, glasses)
 - Contain spill to prevent a release to the environment
 - Contact OEHS AT 824-2171

Waste Lamps

Universal Waste Lamps Include:

- Fluorescent
 - Even Green-tipped
- Compact Fluorescent Lamps (CFLs)
- Mercury Vapor
- Metal Halide
- High Pressure Sodium-Vapor
- UV
- Incandescent

Waste Lamps

Can contain:

- Elemental Mercury
 - Lamps can contain up to 40 milligrams



- Lead



- Antimony



- Cadmium



Green-tipped Lamps

- Most people believe that the mercury content in these lamps are low enough to allow for disposal in the general trash
 - This is NOT Correct!!!
 - You should regard green-tipped lamps as **Universal Waste**



UAH collects and recycles all lamps generated on Campus

Safe Handling and Storage

- Wear cut resistant gloves and safety glasses any time you are working with lamps



Safe Handling and Storage

- Place lamps in the proper-sized cardboard box to prevent breakage (remove cardboard dividers from 4 foot boxes)
- Affix the box with a "Universal Waste Lamp" sticker



Labeling

Once a used bulb is placed into a box:

- Date the label
- Circle the type of lamp in the box
- Attach label to box
- Ensure box is closed

Universal Waste Lamps	
University of Alabama in Huntsville	
Accumulation Start Date:	
Categories (Circle One):	
Fluorescent Lamps 4 Foot or Less	Shatter-Shield
Fluorescent Lamps >4 Foot	U Tube/Circular Lamps
Compact Fluorescent Lamps	Incandescent Lamps
HID (Sodium, Metal Halide & Mercury Vapor)	Broken Lamps
Attach one label to the end of the box	

Safe Handling and Storage

- Avoid overfilling a box
- Tape ends of the boxes with packing tape – Not duct tape



Safe Handling and Storage

- Never tape lamps together
- Used lamps must be placed and packaged immediately in the Universal Waste Shed at JRC



Safe Handling and Storage

- Lamps can be stored up to **one year**, then must be sent out for recycling
- Boxes on pallets must not be more than 4 boxes high



Broken Lamp Cleanup

If a lamp breaks:

- Leave area for a few minutes so vapors can escape
- Wear gloves and glasses
- Scoop up glass pieces and powder using stiff cardboard
- Use duct tape or a wet paper towel to capture any small pieces



Broken Lamp Cleanup

- Do not use a vacuum on hard surfaces
- Place fragments and all other cleanup items into a sturdy, lined cardboard box
- Label box with Universal Waste sticker, and circle “broken lamps” as the contents

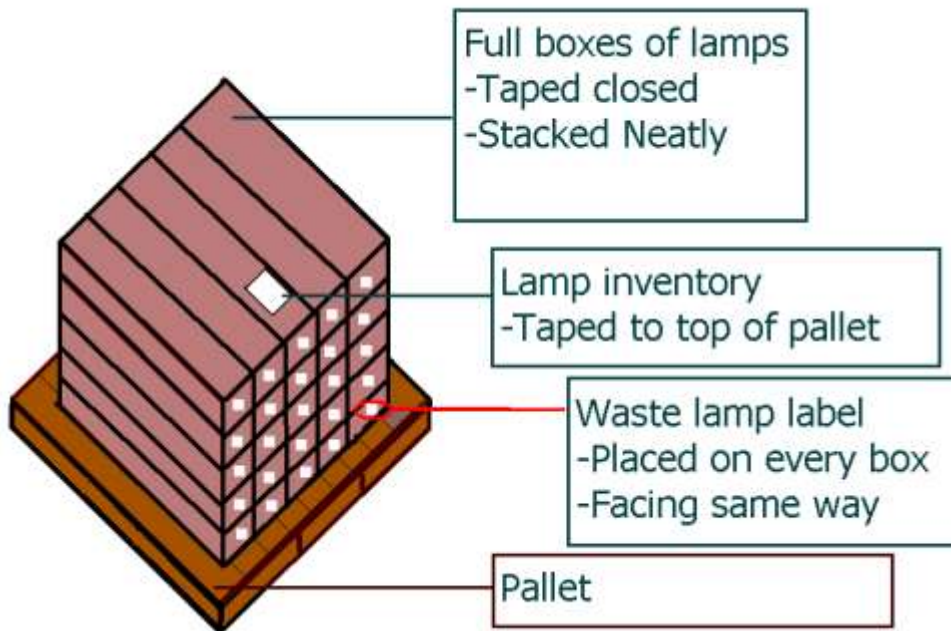


Lamp Housekeeping

- Keep the lamp accumulation area clean and safe
- Have spill/breakage response material nearby
- Close drum holding broken bulbs. If it will not close, contact OEHS.
- Boxes must be closed when not in use
- When the box is full close the lid/top and seal with packing tape



Palletizing Lamps



- No more than 4 boxes high and wide
- Alternate directions on each layer
- Shrink wrap before placing the inventory on top of the pallet

Universal Waste Storage Shed



Thermostats (mercury containing equipment)

Mercury-containing equipment (MCE) is handled as Universal Waste



Thermostats (mercury containing equipment)

Handle MCE carefully to prevent breakage and releases of mercury to the environment

- Place MCE in a closed, structurally sound, and compatible container
- Contact OEHS for pickup

If there is a mercury spill...

- Secure the contaminated area and contact OEHS **immediately**

Pesticides

Recalled and unused pesticide products are managed as Universal Waste

- Contain product in a closed, structurally sound, compatible container
- Contact OEHS for a pickup



Questions?

Please contact OEHS if you have any questions or concerns

OEHS can be reached at: X2171 or X6053

To receive credit for this training complete the quiz by selecting the link

[UNIVERSAL WASTE QUIZ](#)