Universal Waste –
Annual Generator Training

Department of University Safety & Assurances
www.safety.uwm.edu
According to **Universal Waste Management Standards** (Chapter NR 673.16), a small quantity handler (UWM) 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

- 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
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

UWM recycles all waste 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 US&A
Waste Lamps

Universal Waste Lamps Include:

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

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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**

**UWM 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
- Affix the box with a “Universal Waste Lamp” sticker
Once a used bulb is placed into a box:

- Date label
- Circle the type of lamp in the box
- Keep a tally of the number of lamps in that box
- Total the number of lamps

Universal Waste Lamps

Name of Campus: UW-Milwaukee
Accumulation Start Date: 03/11/2009
Categories: (Circle One)
- Fluorescent Lamps 4 Foot or Less
- Fluorescent Lamps > 4 Foot
- Compact Fluorescent Lamps
- HID (Sodium, Metal Halide & Mercury Vapor)
- Shatter-Shield
- U-Tube/Circular Lamps
- Incandescent Lamp
- Broken Lamps

Number of Lamps: 5

Attach One Label to the end of Each 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
- Store lamps in a safe place – not in mechanical or electrical rooms
Safe Handling and Storage

- Lamps can be stored for **one year**, then must be sent out for recycling

- Call Stores for a pickup when you have a large accumulation
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
Universal Waste Accumulation Area

Universal Waste Lamps are stored in this location and picked up by Facility Services on a regular basis. Accumulation limits for Waste Lamps are 1 year.

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- Date label
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- Contact Stores for a pickup

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Attach One Label to the end of Each Box
Mercury-containing equipment (MCE) is handled as Universal Waste
Handle MCE carefully to prevent breakage and releases of mercury to the environment

• Place MCE in a closed, structurally sound, and compatible container
• Contact US&A for pickup

If there is a mercury spill...

• Secure the contaminated area and contact US&A immediately
Recalled and unused pesticide products are managed as Universal Waste

• Contain product in a closed, structurally sound, compatible container

• Contact US&A for a pickup
Please contact US&A if you have any questions or concerns.

US&A can be reached through the web at http://www.uwm.edu/Dept/EHSRM/ or by phone at X4999 or X2883.