

Universal Waste Management Regulatory Overview

Two regulatory agencies oversee universal waste compliance in Maryland:

- **State** – *Maryland Department of the Environment (MDE)*
- **Federal** – *United States Environmental Protection Agency (USEPA)*

Both can proceed with civil or criminal prosecution for hazardous waste violations

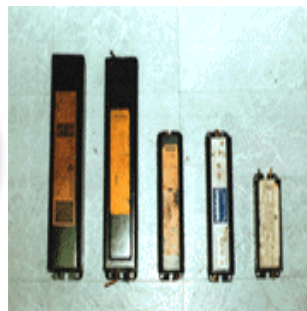
- The regulation encourages the collection and recycling of certain categories of hazardous waste. Effective November 1, 2002, MDE finalized amendments to COMAR 26.13 implementing EPA's **Universal Waste Rule**
- **waste that have been identified as "Universal Wastes"**
- **The regulation also provides alternative management standards for these wastes so that they are not subject to the full range of the hazardous waste regulations**

Identifying Universal Waste

- Universal Wastes are certain hazardous wastes that are universally generated in a wide variety of settings, not solely industrial, and present a limited hazard.
- Although not subject to the full range of hazardous waste regulations, Universal Wastes **MUST** still be managed separately from general trash.

The categories of universal waste include:

- lamps
- batteries (all types)
- PCB ballasts
- mercury devices



- **Universal waste lamps consist of:**

- fluorescent lamps
 - compact fluorescent lamps
 - high intensity discharge lamps
 - neon lamps
 - mercury vapor lamps
 - high pressure sodium lamps; and
 - metal halide lamps
- Incandescent bulbs are non-hazardous and may be thrown in regular trash.

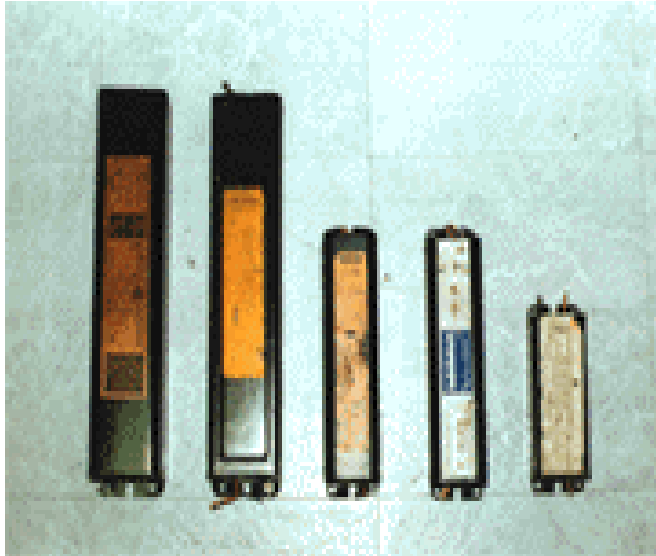


- **Universal Waste Batteries consist of:**

- Nickel-Cadmium batteries
 - Metal hydride batteries
 - Lead-acid batteries
 - Silver oxide
 - Mercury
 - Lithium
 - Zinc carbon
 - Alkaline batteries (e.g., AA, AAA, C, etc.)
- These batteries are commonly used in pagers, cell phones, cameras, and computers.



- PCB light ballasts are electrical devices used for starting and regulating fluorescent and discharge lamps
- In 1978 the US EPA banned the use of PCBs which were used in the processing of light ballasts.
- Ballasts produced after 1978 that do not contain PCBs are labeled by the manufacturer “No PCBs”.
- If ballast does not contain the label or markings stating “No PCBs”, assume that it contains PCBs and manage as universal waste.



- Mercury thermostats are temperature control devices that contain metallic mercury in an ampule attached to a bi-metal sensing element.
- Mercury thermometers are devices that measures temperature or temperature gradient.
- Mercury manometers are devices to measure pressure.



Proper Management and Handling Procedures

- Containers and Packaging
 - Labeling and Marking
 - Storage
- Lamps must be placed in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. (40 CFR 273)
 - Handlers shall collect lamps and place in containers provided by the NIH Chemical Waste Services contractor.

Containers Provided by NIH Chemical Waste Services: **40 gallon fiber drum used for straight tubes**



Containers Provided by NIH Chemical Waste Services: **30 gallon fiber drum used for U-Tubes**



Containers Provided by NIH Chemical Waste Services: **30 gallon fiber drum used for HID Lamps**



**Universal Waste Lamps –
Proper Handling Procedures**

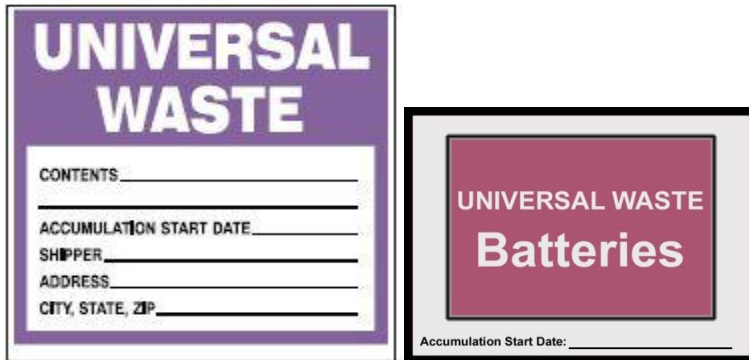
- **DO NOT MIX LAMPS.** Each type of Lamp must be placed in a separate container.
- **Containers must remain closed** unless adding or removing lamps.
- Container must lack evidence of leakage, spillage or damage. (40 CFR 273)
 - As soon as the lamp or first lamp (if multiple lamps are being stored in a single container) is placed in the container then the container must be **labeled with the words Universal Waste-Lamp(s) and must be dated.**
 - Universal wastes may be stored at the point of generation or in a maintenance shop provided they:
 1. Are stored in a secure location where they will not be accidentally broken or considered disposal trash.
 2. Location identified as a UW storage area.
 3. Each container properly labeled as indicated.



Universal Waste Batteries –

Proper Handling Procedures

- Universal waste batteries that are in good condition and do not show evidence of leakage spillage or damage are not required to be stored in a container.
- It is recommended that smaller batteries be stored in a larger container or packaging for labeling purposes.
- If you choose to label each battery individually, then you must label each with **the words Universal Waste-Batteries and with the date it became a waste.**
- If you choose to place each battery in a larger container, then as soon as the first battery is placed in the container the container must be **labeled with the words Universal Waste-Batteries and must be dated.**
- Universal wastes batteries may be stored at the point of generation or in a maintenance shop provided they:
 - Are stored in secure locations where they will not be accidentally broken or considered disposal trash.
 - Location identified as a UW storage area.
 - Each container properly labeled as indicated.



Containers Provided by NIH Chemical Waste Services: ***55 gallon metal drum used for PCB Ballasts***



Universal Waste PCB Ballasts – *Proper Handling Procedures*

- **DO NOT MIX PCB Ballasts with non-PCB Ballasts.** Each type of ballast must be placed in a separate container.
- **Containers must remain closed** unless adding or removing ballast.
- Container must lack evidence of leakage, spillage or damage. (40 CFR 273)
 - As soon as the PCB ballast or first PCB ballast (if multiple ballasts are being stored in a single container) is placed in the container then the container must be **labeled with the words Universal Waste-PCB Ballast(s) and must be dated.**
 - Universal wastes may be stored at the point of generation or in a maintenance shop provided they:
 1. Are stored in secure locations where they will not be accidentally broken or considered disposal trash.
 2. Location identified as a UW storage area.
 3. Each container properly labeled as indicated.



A purple rectangular label with white text. The top half has the words "UNIVERSAL WASTE" in large, bold, white letters. Below this, there are five horizontal lines for text, each preceded by a label: "CONTENTS", "ACCUMULATION START DATE", "SHIPPER", "ADDRESS", and "CITY, STATE, ZIP".



Universal Waste Mercury Thermostats - *Proper Handling Procedures*

- Mercury thermostats must be managed in a way that prevents releases of any mercury to the environment.
- The mercury thermostats must be labeled with the words “Universal Waste – Mercury Thermostat” and must also be labeled with the date they became a waste.
- Universal wastes may be stored at the point of generation or in a maintenance shop provided they:
 1. Are stored in secure locations where they will not be accidentally broken or considered disposal trash.
 2. Location identified as a UW storage area.
 3. Each container properly labeled as indicated.

UNIVERSAL WASTE

CONTENTS _____

ACCUMULATION START DATE _____

SHIPPER _____

ADDRESS _____

CITY, STATE, ZIP _____



- Emergency Procedures

Universal Waste Lamps –

Emergency Procedures

If a lamp breaks or shows evidence of leakage, spillage, or damage you must:

Immediately call the Division of Environmental Protection (301-496-7990)



Universal Waste Batteries –

Emergency Procedures

- If the casing of a battery is breached or shows evidence of leakage, spillage, or damage:

Immediately call the NIH Fire Department - 911



Universal Waste PCB Ballasts –

Emergency Procedures

- If the casing of a PCB ballast is breached or shows evidence of leakage, spillage, or damage:

Immediately call the NIH Fire Department - 911



Universal Waste Mercury Thermostats –

Emergency Procedures

- If the mercury thermostat is breached or shows evidence of leakage, spillage, or damage:

Immediately call the NIH Fire Department - 911



- Waste Collection
- Call NIH Chemical Waste Services at **301-496-4710** to request delivery of empty collection containers or to schedule waste pick-up.
- Do not store waste at your generator location for more than 60 days from the time you start accumulating the waste. Call for a waste pick-up within the 60 day timeframe.

Hazardous and Universal Wastes in Construction Projects

- Hazardous and Universal wastes generated are to be packaged, stored, shipped, and treated in accordance with Waste Regulations
- Hazardous materials shipping documents **MUST** be reviewed and signed by DEP personnel
- Treatment facilities to be used require prior DEP approval
- All contractor generated hazardous and universal waste must be tracked by DEP along with all other wastes and reported to Maryland Department of the Environment annually