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Management of Universal and Special Category Wastes

Environmental Health and Safety Division



Universal and Special Category Wastes

- The United States Environmental Protection Agency (EPA) and the Georgia Environmental Protection Division (EPD) regulate toxic wastes to reduce potential environmental contamination.
- Regulatory agencies have created special rules for the management of some of these hazardous wastes to ease the regulatory burden on businesses.
- Two such categories of waste are Universal Waste and Special Category Waste.
- This presentation covers proper handling, staging, and preparation for transport and recycling or disposal.



Universal Waste

- In Georgia, the following are designated as Universal Wastes and may be managed as such for special recycling or disposal:
 1. Mercury-containing lamps/devices
 2. Batteries
 3. Unused pesticides



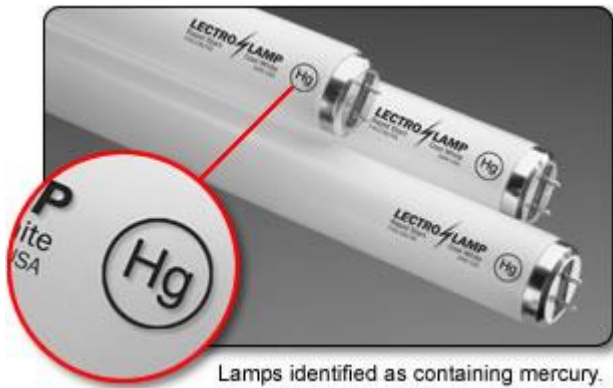
Universal Waste Handling

- Universal waste lamps contain mercury in the lamp powder and neon gas.
- Batteries may contain lead, other heavy metals, and acid.
- Pesticides may contain various toxic ingredients.
- Due to the volume of material these wastes represent, they require special handling for recycling or disposal, but are not counted against an institution's hazardous waste volume.



Mercury-containing Lamps

- Lamps containing mercury cannot be disposed in normal trash. They have to be managed and properly recycled.



Mercury-Containing Lamps

- The following categories of lamps contain mercury in powder coatings or internal gas and must be handled as universal waste:
 - Fluorescent lamps (all shapes and sizes): straights, u-bends, circular, compacts, and UV.
 - High-intensity discharge (HID) lamps, including mercury and sodium vapor, metal halide, halogen, quartz, microscope, and projector lamps.



Lamp Handling Precautions

- Lamps can break easily. Remove them carefully from the fixture. Use care to not drop or strike them against objects.
- Don't leave lamps loose, standing or laying down.
- Do not tape lamps together in bunches.
- Lamps can be stored temporarily in satellite accumulation area until the carton is full and the box is labeled.



Lamp Handling Precautions

- Place straight lamps into an empty straight lamp carton.
- Other types can be placed into any good lamp carton.
- Do not mix new and used lamps in the same carton.
- Avoid lamp breakage by not forcing lamps into a carton.



Lamp Handling Precautions

- Do not mix different types/styles of lamps in a carton.
 - This can cause extra space in the box that allows for shifting and breakage during transport.



Lamp Handling Precautions

- Fill the carton full to give it strength on all sides. Half-filled cartons collapse under the weight or cartons above them.
- Interfold end flaps until carton is filled. Remove all filler material from carton. When full, tape the end flaps closed.
- Never stand closed carton of lamps on end where they could fall over and break lamps within the carton.



Lamp Containment

- Once carton is full, tape it securely at the end being closed.
- Affix a [Universal Waste Label](#) on the end of long cartons or the side of square cartons.
- Write the date on the label when the first lamps was placed in carton.
- Write the quantity of lamps in filled carton on label.
- Write type of lamps in carton on label.



Lamp Handling Precautions

- If a lamp gets broken, leave the area for at least 15 minutes to avoid breathing mercury dust and gas.
- Sweep up the broken glass carefully to avoid raising dust. Place the glass in a carton and seal all carton openings.
- Write “BROKEN GLASS” on the carton and take carton to Clay Street Universal Waste staging area.
- If one or more lamps break within a carton, seal all carton openings to contain the dust and broken glass.



Lamp Staging

- Take lamps to the Universal Waste staging area inside the Clay Street warehouse for the Health Sciences Campus.
- Summerville and Forest Hills Lamps can be taken to the Electrical Shop.
- Place lamp cartons on the appropriate pallet.
- Stack lamps a maximum of 6 rows high on a pallet.
- All lamps should be placed so that the carton stickers face forward (toward the interior of the warehouse).



Used Batteries

- Alkaline batteries may be disposed in normal trash. All other types and sizes of batteries must be collected for recycling.
- Place tape on the ends of batteries to protect the batteries from corroding during holding for pick-up.
- Place used batteries in the black plastic battery pan provided in the Clay Street staging area.
- EHS will sort the batteries for vendor recycling.



Used Batteries

- Remember, alkaline batteries can be disposed of in the regular trash.



Special Category Wastes

- The following wastes are not classed as Universal Waste, but may be recycled or disposed of as Special Category Wastes and must not be placed in general trash:
 - PCB containing lamp ballasts
 - Non-PCB containing lamp ballasts and electronic lamp ballasts
 - Used oil
 - Rags and materials contaminated with oily waste
 - Scrap tires



Pesticides

- Use as directed on the label and use all material by the expiration date.
- Be sure to list the pesticide in the HPA Chemical Inventory.
<http://www.augusta.edu/services/ehs/chemsafe/invprog.php>
- All leftover pesticides should be disposed of as Hazardous Waste via request for pick-up in HPA.



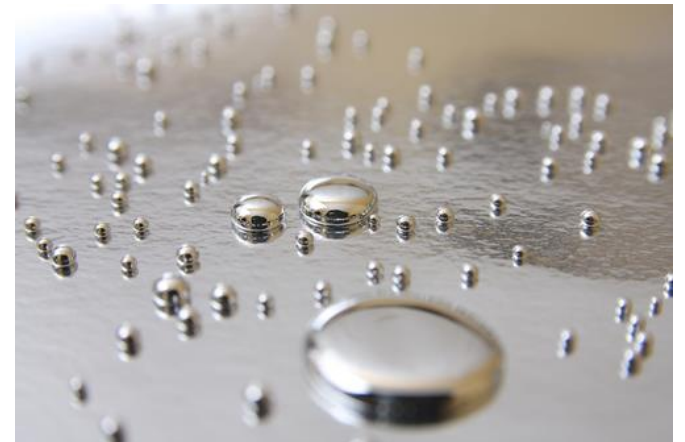
Lamp Ballast Collection

- Place lamp ballasts into cartons and take them to the Clay Street recyclables staging area.
- Remove all wiring (place wiring in plastic bucket) and place the ballasts in the black plastic pan designated for lamp ballasts.
- EHS will sort the ballasts for shipment and processing.



Mercury Containing Devices

- Mercury thermometers, thermostats, and other devices are turned in to EHS for proper recycling. Carefully contain the device to prevent breakage.
- Should a mercury device break and spill liquid mercury, contact EHS at once (706-721-2663) for a clean-up. Do not attempt to clean it up yourself.
- Leave the area and keep others from entering the spill area to avoid breathing the toxic mercury vapor.
- EHS will respond with special equipment for the clean-up.



Used Oil

- Used oil is poured into drums at Vehicle Services, Facilities Shops (dock area), and Grounds Maintenance (RC and MS Buildings).
- Oil drums must be labeled “USED OIL” and bungs must be in place when funnel is removed.
- Oil removed from chillers must be in its own drum for testing prior to pick-up to determine its halogen content.
- Oil drums must be on drum pallets for secondary containment.
- EHS coordinates the vendor used oil pick-ups.



Oily Rags and Solids Waste

- Oily waste rags and other materials must be placed in an oily waste solids container.
- The drum must be properly labeled.
- When a drum is completely filled, call EHS (706-721-2663) to have it disposed of through a special vendor.
- Direct any questions about disposal of this drum to EHS (706-721-2663).



Other Special Wastes

- The following special wastes are recycled or disposed of through EHS:
 - Dental mercury amalgams
 - Lead pieces or dental bite wings
 - Photographic wastes
 - Scrap tires (from Vehicle Services)
- The following special wastes are recycled or disposed of through Materials Management's surplus program:
 - Printed circuit boards from electronic equipment.
 - Computers and peripheral items.
 - Laboratory and audiovisual equipment.



Scrap Metal



- Compressed gas cylinders must be totally empty of contents and have their valve stems removed before being placed in the scrap metal bin at the Facilities Management loading dock.
- Metal drums must be empty of contents and have the large bung removed, or have a hole punctured in them prior to being placed in the scrap metal bin.
- Contact Chemical Safety with questions or for assistance (706-721-2663)



Waste Paint

- Do not dispose lumpy oil-based paint and similar waste products in the regular trash or universal waste. and must be given to Chemical Safety as hazardous waste.
- Contact EHS (706-721-2663) for directions regarding disposal of non-reusable latex paint.
- Paint containers must be properly labeled as to the type of paint.



Aerosol Cans

- Aerosol cans must be collected and puncture-drained of any contents and propellants before disposal.
- Chemical Safety collects these cans from departments and puncture-drains them for proper disposal as scrap metal.
- Each department using aerosol cans should have a collection container for them and contact Chemical Safety (706-721-2663) for a pick-up when the container is filled.



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The End

