LIGHT BULB DISPOSAL GUIDANCE FOR FACILITIES

Overview
There are Federal (40 CFR part 273) and Missouri (10 CSR 25.16.273) regulations governing the disposal of the discarded light bulbs. Light Bulbs are regulated as Universal Waste. Universal Waste is a set of regulations created to streamline hazardous waste management of some widely generated wastes, such as light bulbs. Light Bulbs are collected and managed by EH&S in order to prevent potential hazardous constituents from reaching an unapproved disposal facility.

Guidance

Types of Light Bulbs

There are four (4) main types of light bulbs; incandescent, fluorescent, high intensity discharge (HID), Low-Pressure Sodium Lamps. Fluorescent, high intensity discharge (HID), Low-Pressure Sodium Lamps must be collected and managed as Universal Waste.

- Incandescent are primarily used for residential lighting. These are the standard bulbs most people are familiar with. These can be disposed of in the common trash.
- Fluorescent are tube bulbs traditionally used in retail, commercial and educational buildings. Fluorescent bulbs are filled with argon gas and when electricity is passed through, a small amount of mercury in the tube produces ultraviolet radiation which in turn causes the phosphorous coating of the tube to give off light.
  - Types of Fluorescent bulbs are tubular, U-shaped (tubular bulbs shaped like a U), Compact (CFL) and Circular. Compact (CFL) bulbs have a ballast that is included in the light bulb.
- High Intensity Discharge (HID) - These bulbs can be found in gymnasiums, large public areas, outdoor activity areas, roadways and parking lots. HID bulbs produce light by striking and electrical arc across tungsten electrodes housed inside a specially designed inner glass tube. This tube is filled with both gas and metals. The gas aids in the starting of the lamps. Then, the metals produce the light once they are heated to a point of evaporation.
  - Types of HID lamps are high pressure sodium and metal halide.
- Low-Pressure Sodium Lamps-Used for outdoor lighting. Operate very similar to fluorescent bulbs.
Management of Discarded Light Bulbs

- Packaging discarded bulbs
  - Bulbs should be placed in cardboard containers with the same kind and size of bulbs.
  - The recommended container is the reuse of manufacturer packaging. Remove any dividers in the containers prior to placing the spent bulbs inside to avoid bulbs from extending beyond the end of the container. There are larger cylinder type containers available. Contact EH&S.
  - Best management and packaging for light bulbs is to keep similar sizes together to eliminate breakage.
  - If they break they must be managed as Hazardous Waste instead of Universal Waste.
    - Package broken bulbs separate, secure container with a screw top lid or a double bag in a cardboard box. Label as Hazardous Waste and submit a chemical pick up request online at ehs.wustl.edu.
- Boxes should be closed and taped shut when not in use.
- Do not cut off box tops, are needed for closure.
- Larger containers for bulb packaging are available from EH&S. These cylinder drums with the lid placed on the container properly are an acceptable closure.

Labeling requirements for Light Bulb Boxes

- Light Bulbs are Universal Waste and shall be labeled as such.
  - All containers of spent bulbs must be labeled with the Universal Waste Label.
  - The Start date must be completed with the date the first bulb was placed in the container.

Storage Requirements for Light Bulb Boxes

- Bulbs must be sent for final disposal in no more than one year after the start date.
- All boxes stored must have their start date less than one year.
- Bulbs must be secured from falling or from potential damage.
- Bulbs should be stored in a dry location.

Disposal of Light Bulbs

- Submit an on-line request for pick-up form on the Environmental Health and Safety website at: http://ehs.wustl.edu