Today at Berkeley Lab

Thursday, February 16, 2006

Disposal Rules for Used Fluorescent Light Bulbs or Tubes

Question: How do you properly dispose of burned out fluorescent light tubes/bulbs?

A) Throw it in the trash
B) Put it in your SAA
C) Stash it in a drawer until someone else finds it
D) Call the Work Request Center (WRC) for a free pick up
E) Place the bulb in an envelope and send it to Facilities via internal mail

Correct Answer: D - Fluorescent bulbs/tubes as well as other high-intensity discharge lamps such as mercury vapor, high-pressure sodium and metal halide types contain mercury. This waste is regulated in California and must be disposed of safely. Here are the other answers, and why they're wrong:

Answer A : In addition to being a regulatory violation, disposing of mercury containing bulbs in the trash may injure a custodian and/or harm the environment.

Answer B : Only broken mercury-containing bulbs should be carefully wrapped, labeled and placed in your SAA (Satellite Accumulation Area). To clean up a broken bulb, wear latex or nitrile gloves and carefully clean up the fragments. Do not vacuum. Vacuuming may disperse the mercury vapor into the air. Wipe the area with a damp disposable paper towel to remove all glass fragments and associated mercury. Keep all people away from the area so that mercury-containing pieces and powder are not tracked into other areas. Keep the area well ventilated to disperse any vapor that may escape. After clean-up is complete, place all fragments along with cleaning materials into a sealable plastic bag. Label the bag and place it in your SAA. Wash your hands .

Answer C : All laboratory employees are expected to perform their work in a safe and responsible manner. Please act responsibly.

Answer E : This situation actually did occur. A mercury vapor bulb was placed in an interoffice envelope and sent to Facilities. Had the bulb broken, employees may have been injured and hazardous materials may have been released.

The LBNL Lighting Crew is available to pick up your spent bulbs free of charge. Call x6274 or contact the Work Request Center (WRC) to arrange for pick-up.

How Fluorescent Lights Work

A typical fluorescent lamp is composed of a phosphor-coated glass tube with electrodes located at either end. The tube contains mercury, of which only a very small amount is in vapor form. When a voltage is applied, the electrodes energize the mercury vapor, causing it to emit ultraviolet (UV) energy. The phosphor coating absorbs the UV energy, causing the phosphor to fluoresce and emit visible light. Without the mercury vapor to produce UV energy, there would be no light.

For additional information on Light Bulb Disposal, call Larry Begley, Facilities Lighting Supervisor, at x6993, or Mark Lasartemay, Waste Generator Assistant, at x6825.

Published by the Berkeley Lab Communications Dept., Creative Services Office