

## **Standard Operating Procedures for Mercury Containing Light (including CFLs), High Intensity Discharge (HID), and High Pressure Sodium (HPS) Bulbs**

**1/1/13**

Burnt out light tubes (T-8, T-12, etc.), compact fluorescent lamps (CFL), high intensity discharge (HID), and high pressure sodium (HPS) bulbs are regulated by the State of Washington Department of Ecology and must be collected and shipped for recycling. The following procedures will allow Washington State University (WSU) to stay in compliance with the regulations in an efficient manner.

### ***Collection Procedure***

1. Burnt out light tubes (T-8, T-12, etc.), compact fluorescent lamps (CFL), high intensity discharge (HID), and high pressure sodium (HPS) bulbs should be placed into the individual package the replacement bulb is supplied in. If this is not available, they should be placed in packaging (e.g. small box, placed in bubble wrap, placed in resealable bag) to prevent breakage. Light tubes are purchased in boxes containing multiple tubes. The burnt out light tubes should be placed back into these boxes. CFL, HID, and HPS lights usually come in individual packages.
2. Boxes of spent light bulbs/tubes must be appropriately labeled with the words "Used Lamps", "Universal Waste Lamps", or "Waste Lamps", and the date the first bulb/tube is placed into the box. Any box that can be closed and has integrity may be used for the collection of spent lighting. In order to simplify and eliminate the use of a wide range of dates EH&S will provide labels to all departments which when used meet all labeling requirements. Labels may be obtained by calling 335-3041, submitting request through EH&S website (<http://ehs.wsu.edu/es/LightBulbRecycling.html>), or by email at [sampsonj@wsu.edu](mailto:sampsonj@wsu.edu).
3. Plastic liners should be used in boxes collecting CFL, HID, or HPS bulbs to help with containment, if light bulbs do break.
4. Collection boxes must be kept closed except when adding or removing bulbs/tubes.
5. Collection boxes must be completely emptied or removed at least once each year. EH&S will go to each designated collection area prior to the one year accumulation limit and remove tubes/bulbs. New labels with a new accumulation date will be attached to the properly labeled collection boxes.
6. EH&S will work with all departments to establish collection areas. Once collection areas are established any changes or additions need to be confirmed with EH&S to ensure all areas are routinely checked by an EH&S employee.

### ***Collection Areas***

In order for EH&S to be able to collect light bulbs/tubes from all locations on campus it is important that collection areas are established. EH&S limits the number of collection areas to a maximum of one per building. Preferably buildings within a close proximity or connected could be combined. If more collection areas are needed or a location needs to be moved notify EH&S of the change to ensure all locations are maintained.

### ***Cleaning Up Broken Light Bulbs/Tubes***

Broken light bulbs/tubes must be cleaned up and collected. Please see *Standard Operating Procedure (SOP) for Broken Mercury Containing Light Tubes/Bulbs* for more information. EH&S follows the Environmental Protection Agency's guidelines for cleaning up broken light tubes/bulbs. Below is a step by step procedure.

1. Have people leave the immediate area
2. If possible air out the room for 5-10 minutes by opening a window or door to the outdoor environment
3. While the area is airing out collect the materials needed to clean up the broken tube/bulb which includes resealable bag, damp paper towel or disposable wet wipe, and dust pan and broom
4. Sweep the broken glass, aluminum caps, and white phosphor powder into the dustpan and place debris into resealable bag
5. Use damp paper towel or disposable wet wipe to clean surface and place into resealable bag
6. If broken light tube/bulb is in carpet do not vacuum, call EH&S at 335-3041 and we will vacuum using equipment dedicated to mercury contamination
7. Take the resealable bag containing the mercury contaminated debris to established collection area. Each collection area has a 5-gallon bucket with a Dangerous Waste label attached. The label will have "contains broken mercury containing light tubes/bulbs" written on the label. Place the resealable bag into the bucket and place the lid on the bucket. EH&S employees will remove debris periodically during regularly scheduled collections

Don't worry if these procedures are not followed exactly as they are only precautions that reflect best practices for cleaning up a broken light bulb/tube. The mercury exposure from a light bulb/tube is not large enough to cause health concerns. For more information see the SOP listed above.

### ***Packaging Procedures***

EH&S will pick up light bulbs/tubes from all collection areas. CFLs, HIDs, and HPSs will be transported to the Chemical Storage Building where they will be separated and packaged for shipment. The boxes of four and eight foot light tubes will be taken to Surplus Stores. Surplus Stores is providing a cargo shipping container for storage. EH&S employees will palletize and shrink wrap the light tubes in accordance with the state approved recycler's guidelines.

### ***Shipment Procedures***

EH&S will arrange shipments with the state approved recycler when 18 pallets have been created or the cargo shipping container is close to being filled. EH&S will communicate with Surplus Stores to avoid shipping on days of auctions or sales. Surplus Store's employees will use a forklift to load palletized light bulbs into the transporter's trailer. EH&S will sign the bill of lading and pay for the recycling.