

Managing Mercury-Containing Compact Fluorescent Lamps for Households July 2010

NOTE: This document is intended for use by households. Businesses which are regulated under 40 CFR 262 must manage fluorescent lamps according to the Universal Waste Rules found under 40 CFR 273 and the provisions in the Arizona Universal Waste Rule (A.A.C. R18-8-273). More information about the Universal Waste Rule and its requirements can be found in the ADEQ fact sheet "Managing Universal Waste Lamps for Businesses December 2009" located on the ADEQ Web site at www.azdeq.gov/environ/waste/hazwaste.

BACKGROUND



Many households have switched from incandescent light bulbs to Compact Fluorescent Lamps (CFLs) in order to reduce energy use.

CFLs can be four to five times more efficient than incandescent bulbs and produce less heat which aids in reducing home cooling costs. It is important to be aware that CFLs contain small amounts of mercury which is necessary for the lamp to function. Recycling is strongly encouraged as the best way to dispose of burned-out CFLs.

MERCURY AND CFLs

A variety of household products contain mercury including thermometers, thermostats, clothes irons, and other electronic devices. CFLs contain 4-5 milligrams of mercury, which is encased within the glass housing. CFLs do not pose a health hazard when used and handled properly and they remain intact. While none of the mercury is released during normal operation, CFLs should always be handled carefully to avoid breakage. Prolonged exposure to mercury has been linked to damage to the kidneys, liver, and central nervous system. Take special care when removing CFLs from fixtures and cleaning up broken CFLs.

Mercury in Common Household Items	
Compact Fluorescent Lamps	5 milligrams
4' Fluorescent Tube	4-12 milligrams
Watch Battery	25 milligrams
Mercury Thermometer	500 milligrams
Non-Digital Thermostat	3,000 milligrams

STORAGE AND HANDLING

Always handle CFLs with care and follow the guidelines on the packaging. Use caution when removing a CFL from its package and when installing or removing from light fixtures. Always hold the CFL by the base, not the glass, when screwing and unscrewing the CFL into its fixture, and never force a CFL into a light fixture.

HOW DO I DISPOSE OF BURNED-OUT CFLs?

The best way to dispose of burned out CFLs is to recycle them. Mercury can be released to the soil, water, and air when mercury containing products such as CFLs are broken, improperly disposed, or incinerated.

Contact your local city or county government for information on household hazardous waste collection events and permanent drop-off sites in your area. Also inquire at local retailers that sell CFLs as to whether they accept burned-out lamps for recycling. Energy Star® qualified CFLs have a warranty and can be returned to the retailer if they fail within the given warranty period. For more information visit www.energystar.gov. Additional information on CFL recycling and drop-off locations can be found at www.earth911.org and www.lamprecycle.org.

In addition to household hazardous waste events, many **Home Depot** and **ACE Hardware** locations will accept burned-out CFLs from households. The following are some options for CFL disposal. Please contact the facility for hours of operation; some organizations may not accept all types of CFLs or may charge a small fee.

IKEA Tempe
 2110 W. IKEA Way
 Tempe, AZ 85284
 (480) 496-5658

Lighting Resources, LLC
 1522 East Victory Street, Suite #4
 Phoenix, AZ 85040
 (602) 276-4278

WM Lamptracker, Inc.

10 South 48th Street, Suite #4
Phoenix, AZ 85043
(602) 353-9282

**City of Tucson and Pima County
Main HHW Program – Main Facility**

2440 West Sweetwater Drive
Tucson, AZ 85705
(520) 888-6947

Hazardous Products Center (HPC)

6770 East Landfill Road
Flagstaff, AZ 86004
(928) 527-9005

HOW SHOULD I CLEAN UP A BROKEN CFL?

The United States Environmental Protection Agency (EPA) recommends the following clean-up and disposal guidelines for broken mercury-containing light bulbs; more information can be found regarding small mercury spills on the EPA's Web site: www.epa.gov/mercury/spills/#fluorescent.

Before You Clean Up: Air Out the Room

- Restrict pets and people from the area.
- Open a window and leave the room for 15 minutes or more.
- Shut off forced-air heating/air conditioning system.

What Do You Need?

- Disposable gloves
- Stiff piece of paper or cardboard
- Glass jar with lid or sealed plastic bag
- Sticky tape or damp cloth/paper towel

Clean-Up Steps: Hard Surfaces

1. Wearing gloves, scoop glass fragments and powder into a glass jar or plastic bag.
2. Use sticky tape to pick up any remaining small glass fragments and powder. Wipe the area clean with a damp cloth or paper towels. Place cloth/towels in the glass jar or plastic bag.
3. Do not use a vacuum or broom to clean up the broken bulb on hard surfaces.

Clean-Up Steps: Carpet and Soft Surfaces

1. If vacuuming the carpet is needed, remove the vacuum bag (or empty and wipe the canister), and put the bag and vacuum debris in a sealed plastic bag. Vacuuming increases the chances of mercury droplets being dispersed into the air.
2. If clothing or bedding materials come in direct contact with broken glass or powder, the material should be thrown away. Do not wash.

3. You can, however, wash materials that have been exposed to mercury vapor, such as the clothing you are wearing when cleaning the broken lamp, as long as that clothing has not come into direct contact with the materials from the broken lamp.
4. Wipe off shoes with a damp cloth or paper towels. Place the cloth/towels in a glass jar or plastic bag for disposal.

Disposal of Clean-Up Materials

- Immediately place all clean-up materials outdoors in a trash container or protected area for the next normal trash pickup.
- Wash your hands after disposing of the clean-up materials.

Future Cleaning of Carpeting and Soft Surfaces

- The next several times you vacuum, shut off the forced-air heating/air conditioning system and open a window before vacuuming. Leave open for 15 minutes after vacuuming.

WHAT NEVER TO DO WITH A MERCURY SPILL

- Never use a broom to clean up mercury. It will break the mercury into smaller droplets and disperse them.
- Never pour mercury down a drain. It may lodge in the plumbing and cause future problems during plumbing repairs. If discharged, it can cause contamination of the septic tank or sewage treatment plant.
- Never wash contaminated clothing in a washing machine. Mercury may contaminate the machine and/or pollute the environment. Clothing that has come into direct contact with mercury should be disposed.
- Never walk around if your shoes might be contaminated with mercury. Contaminated clothing can also spread mercury throughout the environment.

MORE INFORMATION

For additional information regarding this subject, please contact ADEQ:

Hazardous Waste Inspections and Compliance Unit
Waste Programs Division

1110 W. Washington St., Phoenix, AZ 85007

(602) 771-4673 or

toll free at (800) 234-5677 Ext. 771-4673

ADEQ Web site: www.azdeq.gov

Hearing impaired persons call

ADEQ's TDD line: (602) 771-4829