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The EPA Improves Guidance for — **Compact Fluorescent Light Bulbs - Cleanup and Recycling**

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On December 28, 2010, the U.S. Environmental Protection Agency (EPA) published its updated guidance on how to properly clean up the remains of a broken compact fluorescent lamp (CFL). Included with the guidance is a new consumer brochure with CFL recycling and cleanup tips. The EPA encourages Americans to use CFLs for residential lighting to save energy and prevent greenhouse gas emissions that lead to global climate change.

The cleanup of CFL can be a problem, primarily because CFLs contain mercury. The mercury found within CFLs is an essential part of CFLs, allowing the bulb to be an efficient light source. On average, CFLs contain about four milligrams of mercury sealed within the glass tubing. By comparison, older thermometers contain about 500 milligrams of mercury – an amount equal to the mercury in over 100 CFLs. At present, manufacturers of fluorescent lighting products are working to reduce the amount of mercury content in CFLs. No mercury is released when the bulbs are intact (not broken) or in use. However, when a CFL breaks, some of the mercury is released as vapor and may pose potential health risks. The broken bulb can continue to release mercury vapor until it is cleaned up and removed from the area. The guidance and brochure provide simple, user friendly directions to help prevent and reduce exposure to people from mercury pollution.

After a CFL has broken, the EPA recommends that before starting cleanup:

- Have people and pets leave the room.
- Air out the room for 5-10 minutes by opening a window or door to the outdoor environment.
- Shut off the central forced air heating/air-conditioning system, if present.
- Collect materials needed to clean up broken bulb.

The EPA also recommends that after cleaning up a broken CFL:

- Promptly place all bulb debris and cleanup materials outdoors in a trash container or protected area until materials can be disposed of properly, and avoid leaving any bulb fragments or cleanup materials indoors.
- If possible, continue to air out the room where the bulb was broken, and discontinue using the heating/ air conditioning system for several hours.

The EPA also recommends the use of local options for recycling CFLs, rather than disposing of them with household trash. Recycling prevents the release of mercury into the environment, and allows the reuse of most of the components in the light bulb. Some states and local jurisdictions have more stringent regulations than the EPA, and may require that you recycle CFLs and other mercury-containing light bulbs. California, Maine, New Hampshire, Minnesota, Vermont and Massachusetts all prohibit mercury-containing lamps from being discarded into landfills. Some retailers, such as Ace Hardware, Home Depot, IKEA, Orchard Supply and Lowe's provide recycling in-store. The website <http://earth911.com> (Earth911.com) provides

assistance with in-store recyclers in most areas. The EPA does not endorse, certify, authorize or approve any of the services mentioned, and retailers only provide them as a convenience to customers.

CFLs that are hazardous waste are required by The Resource Conservation and Recovery Act (RCRA) to be designated as "universal wastes". Universal wastes are:

- generated in a wide variety of settings, not solely industrial
- generated by a vast community
- present in significant volumes in nonhazardous management systems.

The universal waste program provides an alternative set of regulations that reduce the regulatory burden by allowing longer storage of these wastes and reduced record-keeping. To be covered under the universal waste program, these items must first be identified as hazardous waste. Only material identified as a hazardous waste that meets the definition of battery, mercury-containing equipment, pesticide, or lamp are managed under the universal waste regulations.

Businesses and industries that qualify as universal waste handlers must follow specific requirements for storing, transporting and disposing of CFLs. However, households are exempt from these regulations. Nonetheless, as CFLs become more ubiquitous in residences, households need to become more keenly aware of proper disposal practices for CFLs.

References:

1. <http://www.epa.gov/cflcleanup>
2. www.epa.gov/cfl
3. <http://epa.gov/wastes/inforesources/pubs/hotline/training/uwast05.pdf>
4. <http://epa.gov/wastes/hazard/wastetypes/universal/laws.htm>
5. <http://epa.gov/wastes/hazard/wastetypes/universal/lamps/frame.htm>
6. <http://www.epa.gov/cfl/cflrecycling.htm>

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