



Managing Spent Fluorescent and High Intensity Discharge (HID) Lamps

A Fact Sheet For Florida Businesses and Government Facilities

Fluorescent or High Intensity Discharge (HID) lighting is a good business choice. Compared to incandescent lighting, fluorescent and HID lighting use less energy and produce less heat. Less energy and heat not only result in lower lighting and cooling costs, but they also result in utility power plants emitting less air pollutants such as mercury, lead, nitrogen oxides, and sulfur dioxides. If you are considering switching to high-efficiency fluorescent or HID lighting, don't hesitate to make the change.

Although fluorescent and HID lighting save energy and money, they do present special disposal considerations. Fluorescent and HID lamps (as well as some types of neon lamps) contain mercury and in most cases are considered to be hazardous wastes when disposed. Mercury is a toxic metal that in certain forms can accumulate in living tissue and cause adverse health effects. Although the amount of mercury in each lamp is small, several million lamps are discarded by Florida businesses each year, making these lamps one of the largest sources of mercury in our garbage. When a lamp is broken or placed in a landfill or incinerator, the mercury can contaminate the air, surface water, and ground water. Mercury contamination in Florida is most evident from the Department of Health's warnings of high mercury levels in fish in a number of our lakes and in the Everglades.

Because of this, these types of spent lamps, excluding those from households, containing any amount of mercury have been banned from solid waste incineration since July 1, 1994, in any quantity. Since most of these types of lamps contain hazardous levels of mercury, they should not be disposed of at solid waste landfills in Florida if more than 10 lamps per month are generated by a business from any one location. Local solid waste departments are the final authority for landfill disposal and may decide to refuse to accept any spent lamps from generators, regardless of the amount of mercury contained in the lamps, especially in those counties or municipalities that also operate solid waste incinerators.

Florida businesses and governmental facilities generating spent fluorescent and HID lamps ("Generators") have two options for managing them: either recycling or landfill disposal.

- 1) You are encouraged to recycle fluorescent and HID lamps, even those with lower mercury content, by following the Chapter 62-737, Florida Administrative Code regulations outlined in this fact sheet. Hazardous waste lamps destined for recycling and managed in accordance with these regulations are considered to be universal wastes in Florida and do not count toward your facility's hazardous waste generator status. Check with the receiving storage or recycling facility for its guidelines on packaging and transportation. A list of recycling facilities in Florida can be obtained by calling 1-800-741-4337. **RECYCLING IS THE RECOMMENDED MANAGEMENT OPTION FOR THESE LAMPS!**
- 2) (a) Generators of 10 or less spent lamps per month per location may dispose of these lamps with the regular trash going to a permitted, lined solid waste landfill. Low mercury, non-hazardous waste spent lamps may also be disposed of at permitted, lined solid waste landfills in any quantities. However, contact your local solid waste management department for any final guidance or restrictions on the landfill disposal of these lamps.
 - (b) If more than 10 spent hazardous waste lamps are generated per month, they may be disposed of at a permitted hazardous waste landfill and would count toward your facility's hazardous waste generator status.

RECYCLING REQUIREMENTS AND GUIDELINES (Continued on Back)

Generator Requirements (Continued on Back)

- Do not place used lamps from business, industry, or institutions in the regular trash.
- Store lamps in an area and in a manner that will prevent them from breaking. *Does not stuff too many or too few lamps into the shipping container. Recycling facilities request that you do not tape lamps together for storage or shipment and may not accept lamps that are taped together.*
- Label the lamps or each container as "Spent Mercury-Containing Lamps for Recycling" or "Universal Waste Mercury Lamps", or "Waste (or Used) Mercury Lamps".
- A business or institutional generator location may accumulate and store up to 5,000 kilograms of lamps (20,000 lamps) at any one time and for up to one year, *if the lamps are destined for recycling*, without being subject to notification requirements (EPA Form 8700-12).
- If lamps are accidentally broken, immediately contain the broken lamps and store them in a tightly sealed container. It

is recommended that you mark the container as “*Broken Spent Mercury-Containing Lamps For Recycling*”.

- Trains employees in proper lamp handling, packaging and emergency cleanup and containment procedures. Non-lamp residues containing mercury and that are generated as a result of a lamp cleanup are to be managed as hazardous waste.
- Do not intentionally break or crush lamps unless you are complying with the “*Drum-top Crushers*” requirements below.
- If on-site storage is not feasible, lamps may be transported to a central accumulation point at one of your own facilities, to a registered handler facility, or directly to a permitted recycling facility. If you transport your own lamps, you also need to comply with the Department’s transporter regulations. See the *Transportation Requirements and Transporter Requirements* below.

Drum-top Crusher Requirements (For Generators Only)

Most recycling facilities prefer unbroken lamps, and they may charge more to accept crushed lamps. Mercury may adhere to the drum, the container, or the metal end caps causing mercury contamination and increased costs for recycling or disposal especially under humid conditions or longer storage times. However, use of this equipment is allowed by a generator only per paragraph 62-737.400(6)(b), F.A.C., as long as the crushed lamps immediately enter the final accumulation container from the drum-top crusher equipment and crushing is done under the following conditions:

- Crushing poses employee health and environmental risks if mercury vapors are released. Releases of mercury vapors or other contaminants shall be prevented, and the user shall comply with all applicable OSHA standards.
- The crushing unit shall be properly maintained (e.g., adequate filter changes), operated per the manufacturer’s written procedures, and the employees using this equipment shall be thoroughly familiar with these procedures.

Handler Facility (Non-generator Collection) Requirements

- Annually registers with the Department as a small or large quantity handler and receives or renews a DEP ID number.
- A *small quantity handler facility* accumulates up to 2,000 kilograms (8,000) of lamps indoors at any one time for no longer than one year.
- A *large quantity handler facility* accumulating 8,000 or more lamps at any one time must also register as such and submit to the Department: a one-time \$1,000 registration fee, an operational plan, and a closure plan including financial assurance.
- Follow other requirements listed above for *Generators* except that crushing of lamps as described above is only allowed by generators without a permit.

Record Keeping Guidelines for Generators & Handlers

- Obtain and keep receipts for shipments of lamps off-site to show DEP and local inspectors that lamps were properly handled. Receipts should have the following information: the quantity of lamps shipped or received, the date of shipment or receipt, and the name and address of the handler or recycling facility receiving any shipped lamps.
- Records of receipts and shipments of lamps are required for large quantity handler facilities (including generators) and shall be kept for 3 years from the date of shipment or receipt

Reverse Distribution Program Requirements

- Sponsored by a lamp manufacturer or distributor (which may include a business distributing lamps to its facilities).
- Sponsor assumes responsibility for collection and recycling of spent lamps.
- Annually registers with the Department, receives/renews a DEP ID Number, and provides a program description including all participating transporters, handlers and recycling facilities.

Transportation Requirements

- When shipping lamps within Florida, a hazardous waste manifest and a licensed hazardous waste transporter are not required for shipments to a handler or recycling facility within Florida.
- When shipping out of Florida, follow the intermediate and receiving states' requirements.
- When shipping into Florida, you may use a shipping paper *unless* your state or an intermediate state requires a hazardous waste manifest; then you must follow those states' requirements.

Transporter/Transfer Facility Requirements

- Annually registers with the Department and receives or renews its DEP ID number as a transporter and/or transfer facility.
- Uses only totally enclosed trucks in good condition.
- If registered as a transfer facility, may store properly packaged lamps on a truck used in the actual transportation of lamps or at an indoor location for up to 10 days.
- Trains drivers in proper handling, packaging and emergency cleanup and containment procedures and keeps these procedures on the trucks.
- Complies with any applicable Department of Transportation (DOT) regulations, including the Hazardous Material Regulations.

Note: Transporters and handlers collecting lamps from generators of 10 or less lamps per month and who do not accumulate more than 100 kilograms (400 lamps) at one time are exempt from the annual registration requirements outlined above.

PCB and Other Light Ballasts

- Ballasts containing PCBs (polychlorinated biphenyls) cannot be disposed in Florida. Send to a processor for removal of PCB components and disposal at approved facilities outside of Florida. Non-PCB components may be managed and recycled in Florida.
- About 25% of non-PCB ballasts contain DEHP (di (2-ethylhexyl) phthalate) which is classified by EPA as a hazardous substance. Disposal of about 1600 of these ballasts would trigger the reportable quantity requirement under the federal Superfund laws. The Department recommends that ballasts of this type not be disposed of at solid waste landfills.
- The Department recommends the recycling of all discarded light ballasts.

For a list of recycling facilities or for further information or questions, contact the Florida Department of Environmental Protection’s Hazardous Waste Management Section at: 1-800-741-4DEP (4337) or at www.dep.state.fl.us.

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