



*Providing environmental and energy information and solutions to
Nevada's businesses and communities*

Universal Waste Lamps

The United States Environmental Protection Agency (EPA), in an effort to ease management of common wastes, developed the Universal Waste Rules. These rules cover batteries, recalled pesticides, thermostats, and as of January 2000, hazardous waste lamps (lamps). Lamps may be hazardous due to high levels of mercury, other heavy metals, and leaded glass which could ultimately contaminate landfills. **Small and large quantity generators must manage hazardous waste lamps either as a hazardous waste or under the universal waste rule.** The universal waste rules are designed to be more business friendly and easily implemented. Universal wastes are not manifested, do not count toward generator status, and the storage and record keeping requirements are more relaxed.

There are two levels of regulation regarding universal waste:

Small Quantity Handler of Universal Waste (SQHUW): defined as any business (handler) which *does not* accumulate more than 5,000 kilograms (11,000 pounds) at any time.

Large Quantity Handler of Universal Waste (LQHUW): defined as any business (handler) which accumulates *more than* 5,000 kilograms (11,000 pounds) at any time.

This fact sheet addresses the requirements for SQHUW. Requirements are different for large LQHUW. If you feel your business may be a LQHUW, please contact the Business Environmental Program (BEP) for additional guidance (800) 882-3233 or (775) 689-6688.

Note: Conditionally Exempt Small Quantity Generators (CESQG) are facilities which accumulate less than 100 kilograms (220 pounds) of all hazardous wastes in a month. These facilities have the option of either managing waste lamps under the universal waste rule or under the CESQG exemption in 40 CFR 261.5. The Nevada Division of Environmental Protection (NDEP) and the Business Environmental Program (BEP) encourage generators to voluntarily participate in collection and recycling programs to ship these waste lamps to collection centers for recycling or proper treatment and disposal.

Note: Ballasts manufactured prior to 1979 contained PCBs. The State of Nevada has deemed PCBs to be hazardous waste per NAC 444.9453. Furthermore generators and transporters of PCBs must obtain an EPA ID# per NAC 444.946.

Common Questions

What types of lamps are considered Universal Wastes?

EPA defines "lamp" or "universal waste lamp" as "the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum". Examples of lamps include, but are not limited to: fluorescent, high intensity discharge, neon, mercury vapor, high-pressure

sodium, and metal halide lamps.

Can I use a Bulb Crusher for my Fluorescent Lamps?

Bulb crushing is considered treatment under RCRA and is not a management option for handlers of Universal Waste. Crushed tubes or lamps may not be managed as a universal waste. A business that uses a bulb crusher must follow applicable hazardous waste generator rules found at 40 CFR parts 262 and 268 and at the Nevada Administrative Code part 444.8671.

Because the Land Disposal Restrictions (40 CFR 268) impose the restriction requirements to the waste at the point of generation, the applicability of these regulations is determined by the hazardous characteristics of the fluorescent tubes before they enter the bulb crusher unit. This means that a generator cannot make a waste determination by conducting an analysis of the crushed bulbs in the unit, instead generators must first determine whether the bulbs are hazardous waste before they are put into the crusher. Such analysis requires a special testing protocol that is typically conducted by the manufacturer of the fluorescent tubes and documented in the MSDS. Unless a facility is able to document that each bulb or tube placed in the bulb crusher is not hazardous for mercury or other metals, the crushed bulbs are required to be managed as hazardous waste. The crushed bulbs would then be counted in the generator's monthly quantity determination to determine the business' generator status. A generator of hazardous waste is obligated to minimize the release of the mercury found in the lamps and the bulb crusher must be a closed container, so a control device is required on all crushers to prevent emissions.

For more information about the drum-top bulb crushing regulations, see the BEP fact sheet on Fluorescent Lamp Drum-Top Bulb Crushing Units

How Are "Green" Fluorescent Lamps Managed?

Newer "green" lamps that passing the hazardous waste toxicity test for mercury are available from several manufacturers. But, the bottom line is that all fluorescent lamps – even the "green" ones – contain some type of mercury. Please check the manufacturer's literature, and with your disposal facility, to ensure that these lamps may be safely managed as non-hazardous solid waste. Like hazardous and universal waste lamps, these lamps may also be sent off to lamp processors/recyclers.

Can household owners dispose of fluorescent lamps in the trash?

Mercury-containing waste lamps are also generated by households, **which are not regulated under RCRA**. While residential households are allowed to dispose of such lamps in the household trash, NDEP highly encourages residents to take these lamps to collection centers, if available.

Management of Universal Waste lamps

Storage and Accumulation Time

Universal waste lamps should be re-packaged in the original container they were received in, or sturdy containers designed to prevent breakage or leakage during foreseeable conditions. The storage area is required to be labeled as "Used Mercury Lamps for Recycling" or "Universal Waste Mercury Lamps for Recycling" (Either sign shall have a line for the Accumulation Start Date). **DO NOT CRUSH HAZARDOUS WASTE LAMPS IF YOU INTEND TO HANDLE THEM AS UNIVERSAL WASTES.** Intentionally crushing lamps is considered treatment, and crushed lamps must be handled as hazardous waste. In the event a lamp is unintentionally broken, the debris must be placed into a suitable container. Universal waste handlers may or may not take

unintentionally broken lamps as a universal waste. If a lamp that has been unintentionally broken requires disposal then it should be managed as a hazardous waste unless the generator has documentation from the manufacturer that the lamp is non-hazardous.

Lamps may not be stored on-site for longer than one year unless the handler (generator) can demonstrate to the EPA that more time is necessary to recycle the waste. Businesses accumulating universal wastes need to be able to demonstrate the length of time the universal waste has accumulated on-site. This can be accomplished by marking the initial date of accumulation on the container, using an inventory system, or placing the universal waste in a segregated storage area.

Transportation

Universal waste lamps may be shipped under a bill of lading. Manifesting is not required unless the shipment goes through a state where the universal waste is considered a hazardous waste.

Universal waste may be shipped to:

- Another universal waste handler, or
- Destination facility (a state approved recycling facility or a licensed Treatment, Storage or Disposal Facility (TSDF)).

Recordkeeping

SQHUV are not required to keep records of universal waste shipments. However, BEP recommends businesses accumulating and shipping universal waste maintain documents supporting their practices.

Training

Employees who handle or manage universal wastes must be trained regarding the handling and emergency procedures appropriate to the universal waste accumulated on-site.

References and Web Resources for Universal Waste Lamp Information

Universal Waste Handlers - Steps to Managing Your Universal Waste Lamps in an Environmentally-Safe Manner- U.S. EPA

<http://www.epa.gov/wastes/hazard/wastetypes/universal/lamps/recycle.htm>

Mercury-Containing Light Bulb (Lamp) Regulatory Framework- U.S. EPA

<http://www.epa.gov/waste/hazard/wastetypes/universal/lamps/frame.htm>

Mercury Lamp Drum-Top Crusher Study- U.S. EPA

<http://www.epa.gov/waste/hazard/wastetypes/universal/drumtop/drum-top.pdf>

For more information about drum-top bulb crushing in Nevada, see the Business Environmental Program fact sheet on Fluorescent Lamp Drum-Top Bulb Crushing Units

http://www.unrbep.org/pdf/fact_sheets/bulb_crusher_fact_sheet_final4_11.pdf

**Companies Accepting Universal Waste Lamps and/or
Sources of Low Mercury Fluorescent Lamps**

*(Note: BEP maintains this list for information purposes,
other companies may also accept lamps or sell low mercury lighting)*

Northern Nevada

<u>Safety-Kleen</u> Sparks, NV (775) 331-4477	<u>Superior Services Inc</u> (800) 556-LAMP	<u>Philip Services</u> Fernley, NV (775) 575-2760	<u>Have Lights Will Travel</u> Sparks, NV (775) 355-6300	<u>Wedco Inc.</u> Lamp recycling boxes (775) 329-1131
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Southern Nevada

<u>Safety-Kleen</u> N. Las Vegas, NV (702) 633-4282	<u>Superior Services Inc</u> (800) 556-LAMP	<u>Philip Services</u> Fernley, NV (775) 575-2760	<u>Pest West Environmental</u> Las Vegas NV Toll Free 1-866-476-7378 or 954-410-5869 Fax Request for Boxes: 1-866-347-8372
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Northern Nevada

<u>Phillips</u> Pat Becker (818) 519-8382	<u>General Electric</u> Mark Laffin (916) 922-1903	<u>Sylvania</u> Royal Wholesale Electric Sparks, NV Don Atwood (775) 359-8330	<u>Grainger</u> (775) 331-7504 (800) 846-7366 Sparks, NV	<u>Superior Lamps</u> (775) 378-4434 Reno, NV
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Southern Nevada

<u>Phillips</u> Pat Becker (818) 519-8382	<u>General Electric</u> John Spadora (702) 396-9090	<u>Sylvania</u> Don Ziemski Las Vegas, NV (800) 795-8264 x100-1222	<u>Grainger</u> (702) 385-6833 Las Vegas, NV	<u>AERC Recycling Solutions</u> 30677 Huntwood Ave. Hayward, CA 94544 (510) 429-1129
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The Business Environmental Program (BEP) is a partner in the Business Services Group
College of Business of the University of Nevada, Reno.

DISCLAIMER: This guidance document is intended as general information and is not provided nor intended to act as a substitute for legal advice or other professional services. BEP advises the regulated community to read all applicable regulations set forth in both US Code of Federal Regulations (Title 40 C.F.R. Parts 260-279) and the Nevada Hazardous Waste Regulations and to keep informed of all subsequent revisions or amendments to these regulations. This guidance document was developed by BEP with funding support provided by the Nevada Division of Environmental Protection (NDEP).

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