



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
3033 North Central Avenue, Phoenix, Arizona 85012

MANAGING MERCURY-CONTAINING WASTE LAMPS AS UNIVERSAL WASTE

A FACT SHEET FOR ARIZONA BUSINESSES AND GOVERNMENT FACILITIES

FS 02-08 (February 28, 2002)

Managing Mercury-Containing Waste Lamps

Background: On May 11, 1995, the U.S. Environmental Agency (EPA) finalized the Universal Waste Rule (40 CFR 273). This rule provides a new streamlined approach for the collection and management of certain widely generated hazardous waste identified as *universal wastes*. The rule is intended to greatly facilitate environmentally sound collection and encourage the proper recycling or treatment of hazardous waste batteries, certain hazardous waste pesticides and mercury-containing thermostats. A provision to petition the Agency to add new wastes to the list is also included in the universal waste rule.

The universal waste rule allows states such as Arizona, who have incorporated the petition provision, to add other wastes to the universal waste program without EPA having to add the waste at the federal level. The universal waste rule became effective in the State of Arizona on June 13, 1996 and mercury-containing waste lamps were added to the list of universal wastes in Arizona effective August 8, 1997.

What are mercury-containing Lamps? A lamp means the bulb or tube portion of a lighting device. A mercury-containing lamp is an electric lamp in which mercury is purposely introduced by the manufacturer for the operation of the lamp. Mercury-containing lamps include, but are not limited to fluorescent, high pressure sodium, mercury vapor, and metal halide lamps. They typically contain mercury in concentrations that exceed the toxicity characteristic leaching procedure (TCLP) limit and, therefore, are hazardous waste.

Who is affected by this rule? Mercury-containing waste lamps are generated by small and large businesses that are regulated under RCRA and have been required to handle these lamps as hazardous waste in accordance with the full measure of the RCRA Subtitle C provisions. This rule eases the regulatory burden on businesses that generate mercury-containing waste lamps. It streamlines the requirements related to notification, labeling, marking, prohibitions, accumulation time limits, employee training, response to releases, off-site shipments, tracking, exports, imports, and transportation. For example, this rule allows companies to transport these waste lamps with a common carrier, instead of a hazardous waste transporter; extends the period of time that businesses can accumulate these waste lamps on-site; and no longer requires companies to obtain a manifest for off-site shipment within Arizona. In addition, when managed under this rule, the weight of the mercury-containing waste lamps are not included in the generator's monthly hazardous waste quantity determination.

What are the requirements for CESQG's? Conditionally exempt small quantity generators (CESQG), i.e. businesses that generate less than 100 kilograms of hazardous wastes in any one month, have the option of managing waste lamps under this rule or under the CESQG exemption in 40 CFR 261.5 (as incorporated by R18-8-261). ADEQ encourages these generators to participate voluntarily in collection and recycling programs by taking these waste lamps to collection centers for recycling or proper treatment and disposal.

Does this rule apply to households, too? Mercury-containing waste lamps are also generated by households, which are not regulated under RCRA . Households are allowed to dispose of these lamps in the trash. While new municipal solid waste landfills are designed to handle small quantities of hazardous wastes, these waste lamps can be better managed in a program designated for collection and recycling. Therefore, ADEQ encourages residents to take these lamps to collection centers located at nearby businesses and other centers for proper recycling or disposal.

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. A business that uses a bulb crusher must follow applicable hazardous waste generator rules found in 40 CFR 262 and Arizona Administrative Code R18-8-262. The crushed bulbs would then be counted in the generator's monthly quantity determination to determine the business' hazardous waste classification. A generator of hazardous waste is obligated to minimize the release of the mercury found in the lamps, so a control device is required on all crushers to prevent emissions. The Arizona Industrial Commission may specify additional requirements for businesses operating bulb crushers. For additional information, please call (602) 542-5795.

How do I manage the "green" fluorescent lamps? Newer "green" lamps are available from several manufacturers that do not fail the hazardous waste toxicity test for mercury. Please check the manufacturer's literature to ensure that these lamps may be safely managed as solid waste. Although these lamps may pass the hazardous waste test, they nevertheless contain mercury, so remember to manage these lamps properly. Like hazardous and universal waste lamps, these lamps may also be sent off to lamp processor/recyclers. Please see the list on the back page of this fact sheet for a listing of processor/recyclers in Arizona.

What about EPA's rule regarding hazardous lamps? The federal rule regarding hazardous waste lamps is only in effect in those parts of the country that do not have locally-approved hazardous waste management programs. Arizona is an authorized program, which means the rules found in the Arizona code (i.e. AAC R18-8-273) are in effect. Arizona has reviewed the federal rule and intends to adopt it. Until then, the handlers of mercury-containing lamps must follow the Arizona code.

Management and Handling Tips:

1. To manage mercury-containing waste lamps as universal waste, a person must follow 40 CFR 273 (Standards for Universal Waste Management) and Arizona Administrative Code (AAC) R18-8-273.
2. After removing the lamps from the lighting fixture, place the waste lamps in the cardboard sleeve or box in which the replacement tubes or bulbs arrived, then store the lamps where they can not be easily broken during handling or storage conditions.
3. Mark the area where the waste lamps are stored and label each lamp or container with any one of the following phrases: "Universal Waste Mercury Lamp(s)," or "Waste Mercury Lamp(s)," or "Used Mercury Lamp(s)."

4. If tubes or bulbs are broken accidentally, immediately contain the releases of fragments and residues from the lamps (usually a heavy plastic bag that can be sealed and placed in a rigid container is sufficient). The fragments and residues must be handled as hazardous waste unless other exemptions apply (i.e., the lamps were generated in a household).
5. Universal waste rules do not allow lamp crushing at the generator, transporter, or collection points. Such activity is considered to be treatment.
6. If you manage crushed bulbs or if you otherwise must manage your lamps as fully regulated hazardous waste you must first do a quantity determination to help determine your generator/handler status. ADEQ estimates that it takes 350 four-foot lamps to equal 100 kilograms of hazardous waste.
7. For additional information concerning this subject, please call ADEQ at (602) 207-4160.
8. A list of mercury-containing lamp processors/recyclers and commercial hazardous waste management facilities in Arizona is provided below:

NOTE: THIS DOCUMENT IS NOT A SUBSTITUTE FOR THE RULES. TO PROPERLY MANAGE MERCURY-CONTAINING WASTE LAMPS AS UNIVERSAL WASTE, ALL APPLICABLE PROVISIONS IN THE ARIZONA UNIVERSAL WASTE RULE (R18-8-273) AND THE FEDERAL UNIVERSAL WASTE REGULATION (40 CFR 273) MUST BE COMPLIED WITH.

WASTE LAMP MANAGEMENT FACILITIES IN ARIZONA

Earth Protection Services,
Inc.
10 South 48th Avenue, #4
Phoenix, AZ 85063-3820
(800) 414-0443

Lighting Resources, Inc.
1522 East Victory Street
Phoenix, AZ 85040
(602) 276-4278

Superior Special Services,
Inc.
5752 West Jefferson Street
Phoenix, AZ 85043
(800) 368-9095

COMMERCIAL HAZARDOUS WASTE STORAGE FACILITIES IN ARIZONA

Heritage Environmental
Services, LLC
5122 West Storey Rd.
Coolidge, AZ 85228
(520) 723-4167

Onyx Environmental
Services
2301 West Broadway
Phoenix, AZ 85041
(602) 243-6154

Safety-Kleen Corp
4161 E. Tennessee Street
Tucson, AZ 85714
(520) 790-7714

Innovative Waste Utilization
2575 South 16th Avenue
Phoenix, AZ 85007
(602) 252-1222

Romic Chemical Corp.
6760 West Allison Road
Chandler, AZ 85226
(520) 796-1040

Safety-Kleen Corp
6625 West Frye Road
Chandler, AZ 85226
(480) 966-2224

Safety-Kleen Southwest
1340 West Lincoln Street
Phoenix, AZ 85007
(602) 258-6155