TCEQ REGULATORY GUIDANCE
Waste Permits Division
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Universal-Waste Regulations for Hazardous Lamps and Mercury-Containing Equipment in Texas

Many lamps and mercury-containing equipment (MCE) contain toxic substances, such as lead and mercury, that pose a threat to public health and the environment when improperly managed. These hazardous lamps and MCE are regulated as hazardous waste unless they are managed under state and federal universal waste (UW) rules.

- Texas rules are in Title 30 of the Texas Administrative Code (30 TAC) Section 335.261[1].
- Federal rules are in Title 40 of the Code of Federal Regulations (40 CFR), Part 273[2].

Lamps and MCE that are not classified as hazardous waste under 30 TAC Section 335.504, are not regulated as UW. If you generate or handle hazardous lamps or MCE, you have the option of being a UW handler. This publication is not a substitute for the rules, but provides assistance to help you understand and comply with them.

Categories of Hazardous Waste Generators

A hazardous waste generator is a person who produces a solid waste that is classified as a hazardous waste (as adopted in 30 TAC Section 335.504) because it is:

1. a listed hazardous waste under 40 CFR Sections 261.31 through 261.33, or
2. a characteristically hazardous waste under 40 CFR Sections 261.21 through 261.24.

Federal and state regulations establish three hazardous waste generator categories for managing hazardous waste:

1. very small quantity generator (VSQG)
2. small quantity generator
3. large-quantity generator

The volume of hazardous waste a generator produces in a calendar month determines which regulations apply to that generator. The EPA has more information about each category of generator[3] online.

[1] https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=261
[2] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-273
[3] https://www.epa.gov/hwgenerators/categories-hazardous-waste-generators

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To better understand the terms, definitions, and classes of waste, see TCEQ publication RG-022, *Guidelines for the Classification and Coding of Industrial and Hazardous Wastes*[4].

Lamps and MCE that May Qualify for Handling as UW

Fluorescent lamps—tube-style lamps, used as overhead lighting in offices and also available in compact globe shapes for a variety of home and office uses.

Mercury vapor lamps—high-intensity discharge (HID) lamps with blue-white light, used as exterior yard lights.

High-pressure sodium vapor lamps—white-yellow HID lights used for street lamps and outdoor home security lighting.

Low-pressure sodium vapor lamps—orange HID lights used primarily in commercial settings.

Metal-halide lamps—newer, more efficient HID lights found in homes and businesses.

Incandescent lamps—light bulbs used in homes and businesses; these only qualify as UW if they contain mercury.

Certain mercury-containing equipment—including thermostats, barometers, manometers, temperature and pressure gauges, mercury switches, and various medical devices that contain varying amounts of elemental mercury used in homes, businesses, electric utilities, and other industries.

Disposing of UW Lamps and MCE

There are two options for disposing of UW lamps and MCE: in a permitted hazardous waste landfill or recycling.

State regulations prohibit disposing of hazardous waste lamps and MCE in municipal solid-waste landfills. This prohibition does not apply to hazardous waste lamps and MCE from households, or to waste generators who qualify as a VSQG.

Permitted Hazardous Waste Landfill

Permitted hazardous waste landfills accept UW for disposal if it is properly packaged. For a list of permitted hazardous waste landfills in your region, see TCEQ publication GI-225, *Commercial Management Facilities for Hazardous and Industrial Solid Waste*[5].

[4] https://www.tceq.texas.gov/downloads/publications/rg/guidelines-classification-coding-of-ihw-rg-22.pdf
[5] https://www.tceq.texas.gov/downloads/publications/gi/commercial-management-facilities-for-ihw-gi-225.pdf

Disposal Cost by Hazardous Waste Landfill

Disposal costs for lamps and MCE at a hazardous waste landfill can vary according to:

- The quantity of waste being disposed.
- The generator's location and proximity to a permitted hazardous waste landfill.
- State and local taxes.

Estimated costs do not include packaging, transportation, or profile fees.

Recycling

Recycling separates the toxic substances, such as mercury, from the glass, aluminum, mercury-containing devices, and other lamp components that can be used to manufacture other products.

Handling UW Lamps and MCE

Accumulation Time Limits

If you are a UW handler, you may accumulate UW lamps and MCE for no longer than one year from the date the UW lamps and MCE are generated or received from another handler, unless you can prove that an extension is necessary to facilitate proper recovery, treatment, or disposal.

Lamps and MCE being accumulated must be clearly marked with the date you began accumulating the waste in the container or storage area. These containers, or this storage area, must be labeled or marked clearly to identify the type of universal waste, as specified in Table 1.

Categories of UW Handlers

Handlers of UW are categorized as small-quantity handlers of universal waste (SQHUWs) and large-quantity handlers of universal waste (LQHUWs).

- **SQHUW** means a UW handler who accumulates less than a total of 5,000 kg of UW at one time.
- **LQHUW** means a UW handler who accumulates a total of 5,000 kg or more of UW at one time.

Table 1. Marking to identify UW.

Item	*Mark with any of these phrases*
UW Lamps (box or container)	Universal Waste—Lamps Waste Lamps Used Lamps
UW equipment containing mercury or its container	Universal Waste—Mercury-Containing Equipment Waste Mercury-Containing Equipment Used Mercury-Containing Equipment
UW thermostat(s) containing mercury or container with only such thermostats inside	Universal Waste—Mercury Thermostat *or* Thermostats Waste Mercury Thermostat *or* Thermostats Used Mercury Thermostat *or* Thermostats

Requirements for Notification and Reporting

If you are a small-quantity handler of UW lamps or MCE, you are *not required* to notify the EPA or TCEQ of your UW lamps and MCE-handling activities.

If you are a large-quantity handler of UW lamps or MCE and have not previously submitted notification to TCEQ, you must:

- obtain an EPA identification number before accumulating or exceeding the 5,000 kg storage limit, and
- notify TCEQ by submitting EPA 8700-12/Site Identification Form [6] to:

  IHW and MSW Registration Team
  Registration and Reporting Section, MC 129
  Permitting and Remediation Support Division
  TCEQ
  PO Box 13087
  Austin TX 78711-3087
  Phone: 512-239-6413

Once you have decided to handle hazardous lamps and MCE as universal waste, the eight-digit Texas code for industrial solid waste is no longer required. The lamps and MCE you handle as UW should not be counted toward your monthly quantity determination for purposes of determining your *hazardous waste generator* status. In addition, you do not have to report the UW lamps and MCE on the Annual Waste Summary that is required under 30 TAC Section 335.9.

If you have already notified TCEQ about your other solid-waste-management activities, you are not required to renotify us.

[6] https://www.epa.gov/sites/default/files/2021-04/documents/excerpt_site_id_rcra_subtitlec_forms_and_instructions_expires_4_30_2024_v2.pdf

Record-Keeping

Any time UW lamps and MCE are stored or shipped off-site, records must be kept on-site. Handlers should keep track of the following:

- Number of lamps and MCE removed from service during each calendar year.
- Storage location of the lamps and MCE.
- Shipping documents (bills of lading).

Storing UW Lamps and MCE

A UW handler of lamps and MCE has a number of options for storage.

On-Site Storage Requirements for UW Lamps and MCE

If you are a UW handler of lamps and MCE, you may store lamps and MCE at your facility, as long as each lamp and piece of MCE remains intact. Remember the following guidelines:

- Store lamps and MCE in a manner that will prevent their breakage or damage.
- Use signs and notices that show employees where and how to store lamps and MCE.
- Label the lamp and MCE storage area or each container as specified in Table 1.
- Clearly mark each container with the date you began accumulating the waste.
- If on-site storage is not possible, transport the UW lamps and MCE to a handler or a destination facility. A manifest is not needed.

Off-Site Storage and Recycling of UW Lamps and MCE

Recycling facilities that receive UW lamps and MCE are excluded from the definition of "UW handlers" (see 40 CFR Section 273.9). Under those requirements, storage before recycling is regulated [see 30 TAC Section 335.261(c)(1)].

Out-of-State Storage, Recycling, or Disposal of UW Lamps and MCE

Lamps and MCE managed as UW can only be sent to another waste handler that meets the standards in 40 CFR Part 273, a destination facility meeting the standards in 40 CFR Sections 273.60 through 273.62, or a foreign destination.

A destination facility must comply with all current applicable requirements for hazardous waste management facilities.

Packaging UW Lamps and MCE for Disposal

Regardless of the disposal method, UW lamps and MCE must be properly packaged to prevent breakage. You need to identify a safe storage area to ensure that your UW lamps and MCE are not accidentally broken or crushed before they are sent to a disposal facility.

When lamps and MCE are removed and replaced with new lamps and mercury-containing devices, the used lamps and MCE should be packaged in the cardboard boxes that contained the replacement lamps and MCE. The boxes containing the hazardous lamps and MCE must be clearly marked with the date you began accumulating the waste in the box. The containers should also be properly labeled as specified in Table 1.

Preprinted labels or rubber stamps that meet regulations of the U.S. Department of Transportation are recommended for high-volume disposal. For more details, Federal Motor Carrier Safety Administration website[7] or call 1-800-832-5660.

Transporting UW Lamps and MCE for Disposal

Requirements for transporting lamps and MCE may be different depending on how these wastes are managed.

To ship UW lamps and MCE in Texas and states where they are managed as UW, you *are not required* to use a:

- Registered transporter with an EPA identification number.
- Hazardous waste manifest, except to pass through states where these wastes not classified as UW.

If you choose *not* to manage your hazardous waste as a UW:

- A hazardous waste manifest *is required* to ship your hazardous lamps and MCE to a recycler or hazardous waste disposal facility.
- Your waste *is subject to full hazardous waste regulation*, including hazardous waste packaging, labeling, and placarding; transportation by a registered hazardous waste transporter; reporting; record-keeping; and paying fees.

Note: All off-site shipments of UW lamps and MCE must be packed, labeled, marked, and placarded according to requirements of the U.S. Department of Transportation, even if they are to be transported by the generator.

[7] https://ask.fmcsa.dot.gov/

Transporter's Storage Limit

A UW transporter may only store the UW lamps and MCE at a UW transfer facility for 10 days or less. A person who transports UW and stores UW for more than 10 days becomes a UW handler.

Crushing UW Lamps

Crushing lamps is permissible only under the controlled conditions described in 30 TAC Subsection 335.261(e). The crushing system must be approved by TCEQ, and the selected crushing method must be carefully evaluated. To get approval for crushing UW lamps, contact the IHW Permits Section:

IHW Permits Section, MC 130
Waste Permits Division
TCEQ
PO Box 13087
Austin TX 78711-3087
Phone: 512-239-2200

Email: ihwper@tceq.texas.gov

The lamps must be crushed entirely inside a drum or storage unit so that the mercury is captured. The captured mercury must then be recycled. Ventilation must be adequate in the space where the crushing occurs.

Intentional crushing of characteristically hazardous lamps—whether it is to physically separate; reduce in volume; or facilitate for transportation, storage, or recovery—is considered "processing" unless the crushing device is capable of completing the recycling process and recovering the mercury as a product.

Note: Filters from a lamp crusher are subject to hazardous waste determination when disposed of (30 TAC Section 335.504) and cannot be managed as UW. It is the generator's responsibility to determine whether used filters are hazardous waste and manage them according to federal and state regulations. Whenever possible, used filter material should be sent to a recycler so that the mercury can be reclaimed.