

Association of Lighting and Mercury Recyclers

A non-profit organization representing members of the recycling industry

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Drum Top Crushing

ALMR Minimum Standards and Criteria for the Safe and Compliant Use of Drum Top Crushing Devices as Part of a Mercury Lamp Recycling Program

Originally provided to EPA as Guidance for Equivalency Demonstration and for States to incorporate into regulations to allow the practice under Universal Waste Rules.

The ALMR has adopted the following Criteria for the safe and compliant use of Drum Top Crushing Devices as part of a mercury lamp recycling program. If used in their entirety these criteria can be incorporated into State's policies to allow generators to conduct intentional crushing of lamps for the purpose of getting them recycled, and for states to meet the federal Equivalency Demonstration required by the Universal Waste Rules. They also become the parameters for DTC use and set forth reasonable controls and accountability for the recycling of the materials processed.

Drum Top Crushing Criteria

1. Drum-top crushing devices may not be used by generators unless all of the following conditions are met.
 - a. The original and any subsequent sales of DTCs must be recorded with the state agency responsible for hazardous and/or Universal Wastes by the seller.
 - b. The DTC owner must register the device with the responsible agency, including
 - Name
 - contact information
 - brand of device used
 - anticipated usage
 - a statement that the plan referred to in 1. c. below is in place.
 - c. The employer must develop and implement a written procedure specifying how to safely crush mercury lamps and have the procedure available for all operators of the equipment. This procedure must include:
 - operation and maintenance of the unit in accordance with written procedures developed by the manufacturer of the equipment
 - any testing and monitoring procedures
 - an assessment of whether surrounding areas will be impacted, either by physical proximity or air exchange with an HVAC system
 - proper waste management practices

- the employer must document maintenance activities and shall retain maintenance logs, test data from the manufacturer reflecting the maximum rated operating conditions, and also any additional test data acquired.
 - a copy of these records must be retained at the owner's facility for public review.
2. The unit owner must meet all OSHA requirements and all operators must receive training appropriate to mercury hazards, crushing procedures, waste handling and emergency procedures (training must be documented).
 3. The owner shall be accountable for the disposition of all materials crushed in the device. Accountability includes, at a minimum:
 - a. An annual report submitted to a regulatory agency indicating the total volume of lamps crushed
 - b. the volume and disposition of any carbon or other filter media from the device
 - c. the name of the TSDFs or destination facilities to which all crushed material was shipped (proof of Certificates of Recycling).
 4. Anyone who uses a DTC may not dispose of the crushed waste or filter medium into the municipal waste stream. Any used filter media (carbon, HEPA, etc.) must undergo the hazardous waste determination and, if necessary, must be managed in accordance with the applicable requirements of 40 CFR 260-270.
 5. Drum-top crushing devices are considered hazardous waste treatment units because they are intended to release but not recover mercury from the materials processed. These treatment units may not be used by Handlers or contractors who are not the original generator, or at any location that is not a Destination Facility operated under the authority of the responsible state agency.
 6. Mobil or unmanned treatment systems using crushing or another form of treatment for mercury lamps are not authorized.

ALMR, The Association of Lighting and Mercury Recyclers, is a non-profit organization representing members of the mercury recycling industry, serving as an educational and informational resource to government, business and the public. ALMR members currently recycle over 80% of the mercury lamps that are diverted from the municipal waste stream.