



# Waste Lead Acid Batteries (LABs)

State of Hawaii, Department of Health



2013

## Background Information

Lead-acid batteries (LABs) can be an affordable and efficient power source, however, they raise some concerns about the environment and human health. Each LAB is estimated to contain up to eighteen pounds of lead and one pound of sulfuric acid. Lead is highly toxic to humans, and can damage the brain and kidneys, affect your hearing and create significant learning disabilities in children. Sulfuric acid poses various dangers to plant and animal life. It can accelerate damage to trees, bodies of water, and the atmosphere.

Generally, LABs designated for disposal by a facility would be subject to significant restrictions because of its hazardous waste toxicity characteristic of lead (EPA waste code D008). However, the Hawaii Department of Health encourages generators to recycle their waste LABs under an alternative management standard called Universal Waste (UW).

## Guidance for Waste Lead Acid Batteries

### Managing Universal Waste LABs

- ◆ UW LABs are prohibited from being disposed.
- ◆ Manage waste LABs in a manner that prevents the release of any waste to the environment. (Example: stacking batteries more than 3 tiers high may cause the bottom tier of batteries to break, resulting in an acid and lead spill. Electrolyte and lead spill debris are subject to requirements of Hawaii Administrative Rules 11-260 through 272.)
- ◆ Leaking or damaged LAB casings must be contained in a compatible container with the contents, structurally sound and closed.
- ◆ LABs that are palletized and shrink wrapped are considered to be containers as long as the pallet is fully enclosed, secure, contains only intact waste LABS, and are ready for shipment. All containers must be stacked in a safe manner, addressing shifting potential, and must have adequate aisle space for emergency response and inspections. NOTE: A tarp covering LABs is not a container and each individual lab must be labeled.
- ◆ A building or locker is considered a containment building if it is fully enclosed, secure, and contains only waste LABs.
- ◆ The construction material of the containment building or locker must be compatible with the material being stored. The base must be free of cracks and gaps and sufficiently impervious to contain leaks, spills and rain.

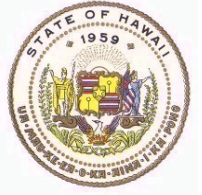
### Universal Waste Labeling and Marking

- ◆ Each individual waste LAB or outer container that is holding the waste LABs must be labeled or marked with the words: Universal Waste Battery(ies), Waste Battery(ies), Used Battery(ies).
- ◆ A pallet of intact waste LABs that have been fully shrink-wrapped and secured may qualify as an outer container for labeling purposes only.
- ◆ A storage room or a storage locker that is fully enclosed and secured, and only contains waste LABs, may qualify as an outer container for labeling purposes only.



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### Universal Waste Accumulation Time

- ◆ The generator must demonstrate the length of time each individual waste LAB has been stored. This can be done by:
  - ◆ Individually labeling waste LABs with the ASD; or
  - ◆ Keeping a log to demonstrate the length of time each individual waste LAB has been stored.
- ◆ Storage of waste LABs is limited to one (1) year.
- ◆ If the accumulation time has exceeded the one (1) year period, the generator or handler must be able to demonstrate that the excess time was necessary to ensure proper collection, recovery, treatment or disposal.

### Off-site Shipment of Universal Waste LABs

- ◆ Shipments of UW LABs must comply with the U.S. Department of Transportation's regulations under 49 CFR 171 through 180.
- ◆ Generators of waste LABs are not required to use the uniform hazardous waste manifest to ship its waste batteries.
- ◆ LQHUW LABs must keep a record of each shipment. Shipment records may take the form of an invoice, manifest, log, bill lading or any other shipping document.
- ◆ UW transporters must not exceed storage limits, ensure delivery of waste LABs to an appropriate destination, and properly manage any spills.

### Terminology:

**Generator:** A facility, whose act or process, produces waste lead acid batteries.

**Small Quantity Handler of Universal Waste (SQHUW):** accumulates less than 11,000 lbs of UW at any time.

**Large Quantity Handler of Universal Waste (LQHUW):** accumulates 11,000 lbs or more of UW at any time.