



Managing Spent Lead-Acid Batteries

This fact sheet summarizes the rules for managing spent lead-acid batteries. Lead-acid batteries are a type of rechargeable battery commonly used in automobiles, boats, and powered equipment. The batteries are considered spent once they cannot be used for their intended purpose. Examples include batteries that cannot hold a charge, damaged or leaking batteries, or batteries no longer needed. Lead-acid batteries typically exhibit the characteristics of corrosivity (EPA waste code D002) and toxicity for lead (EPA waste code D008), making them hazardous waste when spent. Lead-acid batteries can pose a threat to human health and the environment. Idaho adopts the federal hazardous waste regulations (40 CFR 124, 260–266, 268, 270, 273, and 279) into state rules (IDAPA 58.01.05). These regulations require owners and operators of facilities that generate waste to determine whether the waste is hazardous and manage it accordingly.

Methods to Manage Spent Lead Acid Batteries

Spent lead-acid batteries can be managed in one of three ways:

1. Hazardous waste under 40 CFR 262
2. Universal waste under 40 CFR 273 or
3. Exempt from hazardous waste standards under 40 CFR 266 Subpart G.

Management of spent lead-acid batteries under 40 CFR 262 (option 1) is the most restrictive, management as universal waste (option 2) is less restrictive, and management as exempt hazardous waste under 40 CFR 266 Subpart G (option 3) is the least restrictive. The following sections discuss the management alternatives.

Hazardous Waste

If spent-lead acid batteries are managed as hazardous waste, the generator is required to conduct a hazardous waste determination (40 CFR 262.11), manage the battery under the requirements of 40 CFR 262 based on generator category, and send the spent lead-acid batteries to a treatment, storage, and disposal facility. The spent batteries must be counted towards the generator's hazardous waste category, and the batteries are subject to labeling requirements and accumulation time limits for Small Quantity Generators and Large Quantity Generators.

Universal Waste

The universal waste regulations (40 CFR 273) allow for streamlined requirements for managing spent-lead acid batteries. Spent lead-acid batteries managed as universal waste are required to be appropriately labeled (e.g., “Universal Waste – Batteries”) and can be accumulated for a maximum of 1 year. Intact batteries must be stored in a manner that prevents release to the environment. Universal waste batteries are not counted as hazardous waste towards the generator’s hazardous waste category and are not required to be shipped on a hazardous waste manifest.

40 CFR 266 Subpart G Exemption

Spent lead-acid batteries that are reclaimed or regenerated in compliance with 40 CFR 266 Subpart G are exempt from hazardous waste standards. The spent batteries are not counted towards the generator’s hazardous waste category and are not required to be shipped on a hazardous waste manifest. The 40 CFR 266 Subpart G exemption has no labeling requirements or accumulation time limits; however, labeling and sending spent batteries for reclamation in a timely manner are the recommended, best management practices.

Damaged and Leaking Lead-Acid Batteries

Damaged and leaking lead-acid batteries cannot be managed as universal waste under the 40 CFR 266 Subpart G exemption. The regulations require that the batteries are intact and the cell is not breached. Damaged and leaking batteries must be managed as hazardous waste under the hazardous waste generators (40 CFR 262) requirements. Any battery that shows evidence of leakage, spillage, or damage that could cause leakage must be stored in a container that is closed, structurally sound, and compatible with the contents of the battery. In addition, battery fluid that has leaked and released must be cleaned up and properly managed.

Electrolyte Removal

Generators may remove electrolyte from spent lead-acid batteries; however, the generator must conduct a waste determination on the electrolyte to determine if it is hazardous. Electrolyte that is hazardous is subject to all applicable requirements of 40 CFR 260 through 273 as hazardous waste.

Helpful Resources

EPA Universal Waste

<https://www.epa.gov/hw/universal-waste>

40 CFR 266 Subpart G Spent Lead-Acid Batteries Being Reclaimed

<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-266/subpart-G>

For More Information

Visit www.deq.idaho.gov or call DEQ’s Hazardous Waste Bureau at (208) 373-0502.