

Lithium Battery Recycling Regulatory Status: US Environmental Protection Agency Issues Memorandum Addressing Frequently Asked Questions



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The United States Environmental Protection Agency (“EPA”) issued a May 24th Guidance Memorandum titled:

Lithium Battery Recycling Regulatory Status and Frequently Asked Questions (“Memorandum”)

The Memorandum was transmitted from Carolyn Hoskinson, Director- EPA’s Office of Resource Conservation Recovery to the LRCD Division Directors, Regions 1-10.

The stated purpose of the Memorandum is to clarify how the hazardous waste regulations for universal waste and recycling apply to lithium-ion batteries.

The Memorandum also notes in regards to its purpose:

- The proportion of electric cars powered by lithium-ion batteries is rapidly increasing
- Lithium-ion batteries are also used to power both electronics and various other devices such as lawn mowers, e-scooters and electric bicycles
- End of life management of lithium-ion batteries and their associated materials is critical
- Recycling lithium-ion batteries is important because they contain valuable critical materials

Lithium-ion Batteries can be distinguished from any other batteries because they have high “energy density” in terms of battery chemistry. “Energy density” means the amount of energy that a system stores in an amount of space. These batteries can be smaller and lighter than other types of batteries while holding the same amount of energy. They utilize what is often referred to as “critical minerals” such as cobalt, graphite, and lithium.

EPA states that the interest in end of life issues for lithium-ion batteries prompted it to examine the applicability of:

- Universal waste handling requirements
- Hazardous waste recycling regulations
- Other Resource Conservation and Recovery Act (“RCRA”) (Subtitle C) provisions

The Memorandum concludes that most lithium-ion batteries are:

...hazardous waste at end of life and that they can be managed under the streamlined hazardous waste management standards for universal waste until they reach a destination facility for recycling or discard.

The frequently asked questions addressed in the Memorandum include:

- Are lithium batteries hazardous waste?
- Does universal waste cover batteries with lithium chemistries?
- What are the universal waste requirements for lithium batteries?
- What are the federal regulations for generators of very small amounts of hazardous waste batteries?
- How does the household hazardous waste exemption apply to batteries?
- Are electric vehicle batteries considered household hazardous waste?
- Can a damaged, defective or recalled (DDR) battery be managed under universal waste?
- What are some additional best management practices for safely storing collected end-of-life lithium batteries?
- What waste management activities are allowed under universal waste for handlers of batteries?
- What is black mass?
- Can universal waste handlers process universal waste batteries by shredding them to make black mass?
- When do the universal waste standards no longer apply to a battery being processed at end of life?
- Does a battery recycler have to get a RCRA Part B permit for hazardous waste treatment, storage or disposal?
- Is a lithium battery a solid waste when it is reused, repurposes or repaired or when it is sent for evaluation for reuse, repurposing or repair?
- Do smelters that process batteries qualify for the smelting, melting refining exclusion from the RCRA boilers and industrial furnaces requirements in 40 CFR part 266 subpart H?
- Is black mass a hazardous and/or solid waste when sent to received for further reclamation?
- Can you recycle lithium batteries using the definition of solid waste transfer-based exclusion at 40 CFR 261.4(a)(24) and (25)?
- When are materials from lithium batteries that are being recycled sufficiently processed to no longer be considered waste?
- Can Lithium batteries be managed under the scrap metal exclusion?

A copy of the Memorandum can be downloaded [here](#).