

Battery Recycling and Disposal



Overview

Batteries may contain hazardous materials such as strong acids, cadmium, chromium, lead, lithium, mercury, and silver. If packaged or disposed of improperly, these materials may present a fire hazard during transportation, pollute the environment, and pose a threat to human health. Waste batteries that contain hazardous materials must be sent to, or collected by, Environmental Health and Safety (EHS). EHS ensures that these batteries are managed in an environmentally sound manner via recycling and ensures compliance with applicable Federal, State, and local regulations. Common examples of batteries and their sources include, but are not limited to:

BATTERY TYPES

- Alkaline
- Lead-acid and lead-acid gel
- Lithium-ion (Li)
- Nickel-cadmium (Ni-Cd)
- Nickel metal hydride (Ni-MH)
- Mercuric oxide
- Carbon-zinc
- Silver-oxide
- Silver-cadmium

BATTERY SOURCES

- Laptop computers
- Cellular and cordless phones
- Cameras and camcorders
- Video and audio equipment
- Pagers
- Appliances and power tools
- Flashlights
- Smoke detectors
- Emergency lighting fixtures

Applicability

This procedure applies to all WCM employees and contractors working on behalf of WCM, which generate waste batteries (Generators). This Update provides guidance on the proper handling, recycling, and/or disposal of waste batteries at WCM.

Responsibilities

Environmental Health and Safety (EHS) ensures that all spent or unwanted batteries generated at WCM are managed in an environmentally sound manner. Furthermore, EHS ensures that this Update is consistent with all applicable Federal, State, and local regulations and provides guidance and training to Generators as needed.

Generators ensure that all waste batteries generated at WCM are collected, stored, and otherwise managed for recycling and/or disposal in accordance with this Update.

Contractors ensure that any waste batteries found during, or created as a result of, WCM construction or renovation projects are collected, stored, and otherwise managed for recycling and/or disposal in accordance with this update.

Procedure

LEAKING BATTERIES

Leaking batteries may require special handling. Contact EHS to report leaking batteries and to obtain guidance on proper disposal.

INTACT BATTERIES

Alkaline and carbon-zinc batteries (excluding button batteries) may be disposed of with normal refuse or sent to EHS for disposal. Follow the steps below to dispose of intact batteries.

1. **TAPE BATTERY TERMINALS** - Except for standard Alkaline batteries (e.g., AAA, AA, C, D, 9-Volt), all batteries must be placed in separate plastic bags or have their terminals taped with clear, non-conductive tape (e.g., packing or scotch tape). Please refer to the chart on page two for clarification. This is required to prevent a dangerous evolution of heat, short-circuiting, and damage to terminals caused by contact with the terminals of another battery in the same container.



**Weill Cornell
Medicine**

Environmental Health and Safety

TEL 646-962-7233 WEB weill.cornell.edu/ehs EMAIL ehs@med.cornell.edu

Weill Cornell Medicine | 402 East 67th Street, Room LA-0020 | New York, NY 10065



Improperly packaged batteries have caused a number of truck fires in recent years; the image to the right is an actual example.

Batteries requiring taped leads prior to disposal	
Battery Type	Required
Alkaline	Not Required
Lead-acid	Required
Lithium-ion (Li)	Required
Nickel-cadmium (Ni-Cd)	Required
Nickel metal hydride (Ni-MH)	Required
Mercuric oxide	Required
Carbon-Zinc	Not Required
Silver-Oxide	Required
Silver-Cadmium	Required



*Truck fire caused by
Improperly packaged batteries*

TIPS FOR REDUCING BATTERY USE

DO	DO NOT
Use rechargeable batteries whenever possible.	Recharge non-rechargeable batteries.
Let a discharged battery cool to room temperature before recharging to ensure the battery obtains a full charge.	Mix different kinds of batteries, including using rechargeable with non-rechargeable, as this may ruin the equipment, shorten the battery life, or cause an explosion.
Charge new rechargeable batteries 14 – 16 hours before use to obtain maximum capacity.	Leave cellular phones, etc., in chargers when not charging (i.e., don't use the charger as a stand) because it will shorten battery life.
Recharge rechargeable batteries only when they are near to fully discharged.	Recharge fully charged batteries for an "extra boost" as it will significantly shorten the life span.
Store batteries in a cool, dry location out of direct sunlight.	Place batteries or equipment with batteries where they will overheat as it shortens the life of the batteries.
Clean contact surfaces when installing batteries so power isn't wasted.	Mix batteries with other objects (such as keys or change) because it can cause short-circuiting.
Purchase batteries only as you need them as they have limited shelf life.	Mix old batteries with new ones, including rechargeable, as it shortens the life of new batteries.
Remove batteries from unused equipment in storage.	Place batteries in the sun for prolonged periods, as they will potentially overheat and leak.

References

- 6 NYCRR Subpart 374-3: Standards for Universal Wastes
- NYS Law ECL 27, Title 21: Mercury-Added Consumer Products Law
- USDOT Pipeline and Hazardous Materials Administration; Battery Safety Compliance Advisory
- [WCM EHS Manual 5.1 – Waste Minimization and Pollution Prevention](#)
- [Salute Safety](#)