

Environmental Health and Safety Update

Battery Recycling and Disposal

Overview

Batteries may contain hazardous materials such as cadmium, chromium, lead, lithium, mercury, and silver. If disposed improperly, these materials may pollute the environment and pose a threat to human health. Waste batteries which 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 WCMC employees and contractors working on behalf of WCMC which generate waste batteries (Generators). This Update provides guidance on the proper handling, recycling and/or disposal of waste batteries at WCMC.

Responsibilities

Environmental Health and Safety (EHS) ensures that all spent or unwanted batteries generated at WCMC 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 WCMC 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, WCMC 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.

December 2006

EHS Update – Battery Recycling and Disposal

Intact Batteries

Follow the steps below to dispose of intact batteries.

1. Alkaline and carbon-zinc batteries (excluding button batteries) may be disposed of with normal refuse or sent to EHS for disposal, see Step 3.
2. All types of waste batteries excluding alkaline and carbon-zinc (e.g. lead-acid and lead-acid gel, lithium-ion, mercuric oxide, nickel-cadmium, nickel metal hydride, silver-cadmium, silver-oxide, and all types of button batteries) must be placed in a container (plastic bucket, cardboard box, envelope, sealable plastic bag) while being accumulated prior to disposal. The container must be labeled “Waste Batteries”.
3. Use one of the following methods for disposal based on the volume of batteries in question:

Campus Mail

Small amounts of waste batteries: place batteries into an Interdepartmental Mail envelope and send to EHS at Box 354

EHS Collection Request

Large amounts of waste batteries: submit an online Chemical Collection Request Form and EHS will collect the containers directly from your location. (<http://www.med.cornell.edu/cgi-bin/ehs-pickup.pl>).

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.	

References

6 NYCRR Subpart 374-3: Standards for Universal Wastes

NYS Law ECL 27, Title 21: Mercury-Added Consumer Products Law

WCMC EHS Manual 5.0 – Waste Minimization and Pollution Prevention

(http://med.cornell.edu/ehs/manuals/5.1_Pollution_Prevention.pdf)