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| Attachment G –Battery Guide  **Document #:** EHS-0026atg  **Issued:** 01/04/2021  **Version: 0** |

# 1.0 Purpose

The following guidance is intended to outline the proper handling, storage, and disposal of batteries generated within the University. Strict adherence to these requirements enables Penn State to manage these waste streams under the Universal Waste regulations. Failure to follow these requirements would require the materials to be regulated as Hazardous Waste.

# 2.0 Scope

This guidance covers all recyclable batteries generated by University operations. Recyclable batteries include lead acid, nickel cadmium, nickel metal hydride, lithium ion, and lithium polymer (single use) batteries.

Alkaline batteries are not covered by this guidance and should be disposed with the regular trash generated for the area.

# 3.0 Responsibility

Specific responsibilities are defined within the Chemical Waste Management Plan.

# 4.0 Procedures

The procedures for proper handling of batteries are divided into several key sections, including; Packaging, Labeling, Transporting, and Disposal. The associated information for each type of waste is summarized below.

**Batteries**

4.1 Packaging Batteries – when a battery is removed from service, the battery must have the terminals protected to prevent short circuiting. The protection of the terminals can be done using any of the following methods:

* Taping of the terminals, use clear tape so as not to cover battery markings and information.
* Place individual battery into a clear plastic bag and seal.

If large quantities of batteries are being generated for disposal, a secondary container may be used to consolidate the individually packaged batteries into one accumulation area. Batteries accumulated in secondary containers must meet the following criteria:

* UN rated polyethylene drum (1H)
* Closed when not adding batteries to the container
* Stored in a dry location and not exposed to the weather
* Batteries should not be taped together prior to placing in the container
* Different types of batteries should be placed in different collection containers
* Accumulation date shall not exceed 1 year from the start.

Never place a broken or damaged battery in the standard battery collection container – all broken and damaged batteries should be collected in a separate container.

4.2 Labeling Battery Containers – once a container is being used to collect batteries, proper labeling is required to be placed on the container. All containers collecting batteries must contain the following information:

* “Universal Waste – Batteries”
* Type of batteries stored in the container
* Accumulation start date (date the first battery was placed in the container)
* Generator name (individual placing battery into container)
* Building name or storage location

4.3 Transporting Full Battery Containers – there is a central accumulation point for full containers to be stored prior to shipping them off-site for proper disposal. For University Park, a standard waste pickup request form (Chemical Waste) must be submitted for battery disposal to move them to the accumulation location (EHS Webpage - Waste Disposal link: <https://ehs.psu.edu/waste-disposal>). For campus locations, please work with the appropriate site contacts in maintenance.

In certain situations, off-site disposal may be direct from the generator location with EHS pre-approval. There are specific paperwork requirements for this type of activity and all shipments must be coordinated through EHS.

**Note – EHS will not pickup or accept batteries that are not properly packaged or labeled. It is the responsibility of the group generating the batteries to verify that the containers are in proper condition for transportation.**

4.4 Battery Disposal – Off-site shipment of recyclable batteries is regulated and must comply with the Universal Waste regulations. In addition to the labeling requirement noted in Section 4.2, it includes the use of proper shipping papers (Bill of Lading). These shipping papers must be prepared prior to shipment by the vendor or EHS and meet the following requirements:

* Must include DOT proper shipping name and number of containers & weights
* Only signed by trained individuals
* Copy of completed Bill of Lading must be forwarded to EHS

Arrangements for proper battery disposal must be coordinated through EHS. To begin this process at University Park, pickup requests must be submitted through the standard waste pickup process (ref. 4.3). For campus locations, please contact your Regional EHS Coordinator for the disposal of Universal Waste batteries.

The shipment of Universal Waste batteries is regulated by DOT; therefore, retention of these shipping papers must be kept on-site for three (3) years in accordance with DOT regulations.