

# Management of Waste Batteries Under the Universal Waste Rule

On May 11, 1995, the U.S. Environmental Protection Agency (EPA) finalized the "Federal Universal Waste Rule." The State of Oregon Department of Environmental Quality (DEQ) adopted the rule on July 12, 1996, which became effective on August 1, 1996. Adoption of this rule classifies hazardous waste batteries as universal waste. The universal waste rule provides an alternative set of management requirements with a streamlined approach for the collection and management for this group of hazardous waste. The purpose of this factsheet is to provide specific guidance for managing waste batteries under the universal waste management rule. Specific rule language citations are provided throughout the factsheet. Federal universal waste rules are found in Title 40 Code of Federal Regulations (CFR), Part 273. State universal waste rule are found in Oregon Administrative Rule (OAR) Chapter 340, Division 113. Both sets of rules need to be followed when managing universal waste.

## What batteries are not subject to management as a universal waste?

(40 CFR 273.2(b)):

Batteries that do not exhibit a characteristic of hazardous waste;  
Lead-acid batteries managed under 40 CFR 266, Subpart G;  
Batteries managed under household hazardous waste or conditionally exempt generator provisions; and  
Batteries that are not yet wastes. Used batteries become waste on the date they are discarded. Unused batteries become waste on the date the person decides to discard them.

## Universal Waste Handler Categories

(40 CFR 273.13, 273.33 and OAR 340-113-040)

A person who generates or receives universal waste, including universal waste batteries from off-site for the purpose of consolidation, is defined as a universal waste handler. There are two universal waste handler categories: (1) A

small quantity handler of universal waste (SQHUW) accumulates less than 11,000 pounds (5,000 kilograms) at any time, and (2) a large quantity handler of universal waste (LQHUW) accumulates 11,000 pounds or more of universal waste at any time. The two universal waste handler categories are subject to similar management standards. In addition, all handlers of universal waste batteries are subject to management requirements that follow. For a detailed discussion of the handler requirements, please refer to the Department's universal waste handler factsheet.

Universal waste handlers who receive universal waste from off-site generators are defined as "off-site collection sites." Off-site collection sites that accumulate more than 1,000 kilograms of universal waste are subject to requirements under OAR 340-113-040, in addition to the applicable universal waste handler requirements. For a further discussion of universal waste handler requirements, refer to the Department's universal waste handler factsheet.

## Universal Waste Battery Management Requirements

### Waste Management (40 CFR 273.13(a) and 273.33(a))

A handler of universal waste batteries must manage them in a way that prevents the release of any waste or component of the waste to the environment. Any battery that shows evidence of leakage, spillage or damage that could cause leakage must be contained. The container must be closed, structurally sound, compatible with the contents of the battery, with no sign of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Handlers of universal waste batteries are prohibited from disposing of universal waste batteries and diluting or treating universal waste batteries. Universal waste batteries must be treated, disposed or recycled by hazardous waste facilities. Handlers of universal waste batteries may conduct the following activities as long as the casing of each individual battery cell is not



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breached, remains intact and is closed, except when removing electrolyte:

- Sorting the batteries by type;
- Mixing battery types in one container;
- Discharging the batteries so as to remove the electric charge;
- Regenerating used batteries;
- Disassembling batteries or battery packs into individual batteries or cells;
- Removing batteries from consumer products; or
- Removing electrolyte from batteries.

**Electrolyte removed from batteries or solid waste generated from the management of universal waste (e.g., battery pack materials, discarded consumer products) is not universal waste and must be managed according to applicable hazardous waste management requirements, if the waste exhibits a characteristic of hazardous waste.**

### **Labeling and Marking**

(40 CFR 273.14 and 273.34(a))

Individual batteries or containers of universal waste batteries must be labeled or marked clearly with one of the following phrases: "Universal Waste-Batteries," "Waste Batteries," or "Used Batteries."

### **Accumulation Time**

(40 CFR 273.15, 273.35 and OAR 340-113-040(3))

Handlers generating universal waste, including universal waste batteries, are prohibited from accumulating universal waste for more than 1 year. Accumulation of universal waste longer than 1 year is permitted if the handler can demonstrate to DEQ that additional time is needed to accumulate such quantities as necessary to facilitate proper recovery, treatment or disposal.

A handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste. Usually, this is done by placing the date on the battery or container holding the batteries on the date the battery becomes a waste.

### **Choosing A Battery Handler Or Destination Facility**

#### **Who Should Handle My Waste Batteries?**

Be aware that as a generator of universal waste, you are ultimately responsible for the proper

management or recycling, and disposal of your batteries even after they leave your facility. Because of this, care should be taken in selecting an off-site universal waste off-site collection site or destination facility to ensure that your batteries are properly managed.

Universal waste batteries may be shipped from the location where they were generated to either an universal waste off-site collection site or to a universal waste destination facility. Off-site collection sites can include retail outlets that sell batteries, government-sponsored collection events, solid waste collection facilities that accept universal waste, as well as hazardous waste recycling and disposal firms. Universal waste destination facilities are required to be hazardous waste recyclers or permitted hazardous waste management facilities. In choosing a universal waste off-site collection site or destination facility, you should know how the waste is going to be managed, both at the off-site collection site and destination facility, and how the batteries will ultimately be processed.

### **Recycling versus Disposal**

Recycling is often, for environmental reasons, the preferred management method for waste batteries. Few firms actually recycle batteries. A list of battery recyclers and service companies who manage batteries is located at the end of this factsheet. When you are contracting with a battery recycling firm, be sure that you understand how the batteries are recycled, which battery materials are actually recycled and which battery components are disposed. It is recommended that you make sure that you receive a certificate or receipt indicating when your batteries were recycled. Retain this receipt for your files. Recycling some types of batteries may be limited or too costly as a reasonable management option. If this is the case, disposal of batteries in a hazardous waste landfill may be the best option. Again, be sure that you understand how your batteries will be disposed, and request a certificate or receipt of disposal for the batteries.

### **Health And Safety Considerations When Handling And Storing Batteries**

Improper storage and handling of universal waste batteries can pose special health and safety risks. Steps should be taken during the handling and storing of batteries to minimize the risks of explosion or adverse health effects.



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Mercury vapors may accumulate in sealed drums if stored for an extended period of time.

Containers should be placed in a well-ventilated area to minimize worker exposure to mercury vapor emissions when they are opened to add or remove batteries.

When accumulating different types of batteries, be aware that some types of batteries may be incompatible with each other. Explosion is another potential risk when batteries are stored in contact with one another. Waste batteries that contain a residual charge when collected together may discharge each other, creating heat and forming hydrogen gas. If the container is not properly ventilated there is a potential for an explosion.

There is a potential for partially-corroded batteries to leak caustic chemicals. If proper precautions are not taken, workers handling batteries may get chemical burns on their skin. Workers handling batteries should protect themselves by wearing protective clothing, including rubber gloves, eye protection and rubberized aprons.

Management of waste batteries must comply with OSHA requirements and be consistent with the information provided with the battery material safety data sheet.

For specific accumulation and shipping management instructions, contact your waste management firm. If you do not know which types of batteries should not be combined, contact the battery manufacturer, company or site receiving your waste batteries.

### **Requirements for Facilities Accumulating More than 2,200 Pounds of Universal Waste From Off-site**

Off-site universal waste collection sites are defined as sites that receive and accumulate universal waste from off-site. In addition to the applicable universal waste handler requirements, off-site universal waste collection sites have additional requirements.

Off-site collection sites accumulating more than 2,200 pounds of universal waste may, depending on the type of batteries that are collected, be subject to additional requirements for notification, tracking and reporting. For additional information on these requirements, please contact the nearest Department office listed on below.

For Further Information . . .

The following information materials are available from the Department:

Universal Waste Rule  
Universal Waste Handler Factsheet  
Waste Pesticide Factsheet  
Universal Waste Mercury-Containing Thermostat Factsheet  
Universal Waste Mercury-Containing Lamp Factsheet  
Universal Waste Activity Notification Form  
For a copy of the above materials or additional universal waste and hazardous waste technical assistance, contact the DEQ regional office nearest you:

#### ***Eastern Region***

*2146 NE 4<sup>th</sup>, Suite 104  
Bend, OR 97701  
(541) 388-6146*

*-or-*

*700 SE Emigrant, Suite 330  
Pendleton, OR 97801*

#### ***Northwest Region***

*2020 SW 4<sup>th</sup>, Suite 400  
Portland, OR 97201  
(503) 229-5263*

#### ***Western Region***

*750 Front St. NE, Suite 120  
Salem, OR 97310  
(503) 378-8240, ext. 253*

*-or-*

*725 SE Main St.  
Roseburg, OR 97470  
(541) 4440-3338, ext. 230*

### **Battery Management Resources**

The following is a partial list of firms that offer waste battery management services. The information is not a complete set of available services. DEQ does not endorse specific recyclers or disposal firms. It is the DEQ's belief that the businesses listed below have either requested to be on this list or provide services in the state of Oregon. DEQ, by providing the list, does not imply that the companies are in compliance with applicable laws. DEQ cautions generators to personally evaluate the services and compliance status of any company they use to manage their waste.

***Advanced Environmental  
Technical Services (AETS)  
Sherwood, OR 97140***



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(503) 682-2341

*Manages all battery types (disposed or recycled depending on type)*

**Full Power Regenerates**

Beaverton, OR 97008

(503) 579-7557

*Manages Ni-Cds, Nickel Metal Hydride and Lithium Ion batteries*

**Bethlehem Resource Recovery Division**

Hellertown, PA 18055

(610) 838-7034

*Manages Alkaline, Carbon Zinc, Mercury, and Carbon Air (recycled) batteries*

**MTI**

Allentown, PA 18103

1-800-554-2372

*Manages Mercury button-cell batteries (recycled)*

**Philip Environmental**

Washougal, WA

1-800-547-2436

*Manages all types of batteries (disposed or recycled depending on type)*

**Mercury Refining Company, Inc.**

Latham, NY 12110

1-800-833-3505

*Manages Mercury/ Silver Oxide Button Cells (recycled), Ni-Cds (recycled), Lithium (treated and disposed), and Carbon/Zinc (disposed) batteries*

**Rechargeable Battery Recycling Corp.**

Stafford, VA 22554-7219

(540) 720-3668

*Manages Ni-Cd (recycled) batteries.*



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