



Enforcement Alert

Volume 5, Number 2

Office of Regulatory Enforcement

March 2002

The 'Battery Act' Law Creates Public Health, Environmental Safeguards Through Phase Out of Mercury Batteries and Other Important Requirements

The Environmental Protection Agency believes that some manufacturers of rechargeable batteries and rechargeable consumer products may not be complying with the Mercury-Containing Rechargeable Battery Management Act, 42 U.S.C 14301-14336 ("Battery Act") while others may be unaware of the Act's requirements.

This issue of *Enforcement Alert* discusses the Battery Act's importance in

protecting human health and the environment, and its requirements for collection, disposal, recycling, labeling and 'easy removability' of regulated batteries. In addition, several national and state recycling and collection programs are highlighted.

Law Promotes Proper Recycling, Disposal, Labeling, and Mercury Battery Phaseout

To prevent the release of hazardous substances into the environment, the Battery Act was signed into law on May 13, 1996. The law serves two purposes: to phase out the use of mercury in batteries, and to provide for the efficient and cost-effective collection and recycling or proper disposal of used nickel cadmium (Ni-Cd) batteries, used small sealed lead-acid (SSLA) batteries, and certain other-regulated batteries.

Among other requirements, the Battery Act also establishes national, uniform labeling requirements for "regulated batteries" and for "rechargeable consumer products" that are manufactured domestically or imported and sold for use in the United States.

Health Risks Caused By Batteries Improperly Disposed

More than 350 million rechargeable batteries are purchased annually in the

The Battery Act applies to Battery and Product

Manufacturers, Battery Waste Handlers, and certain Battery and Product Importers and Retailers

United States. Rechargeable batteries, like nickel-cadmium (Ni-Cd) or small sealed lead-acid (SSLA) batteries, contain toxic heavy metals such as cadmium, mercury, and lead. These heavy metals present no threat to human health or the environment while the battery is being used. When thrown away, however, these batteries can cause serious harm to human health and the environment if they are discarded with ordinary household or workplace waste.

Approximately 73 percent of municipal solid waste is either land-filled or incinerated. Neither of these methods is suited for the disposal of rechargeable batteries. In landfills, heavy metals from rechargeable batteries have the potential to leach slowly into the soil, ground water, and surface water. When incinerated, the heavy metals can enter the air through smokestack emissions and can concentrate in the ash produced by combustion. When the incinerator ash is disposed of, the heavy metals in the ash can enter the environment.

Although these batteries account

About

Enforcement Alert

Enforcement Alert is published periodically by the Office of Regulatory Enforcement to inform and educate the public and regulated community of important environmental enforcement issues, recent trends and significant enforcement actions.

This information should help the regulated community anticipate and prevent violations of federal environmental law that could otherwise lead to enforcement action. Reproduction and wide dissemination of this publication are encouraged.

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for a relatively small portion of the total wastes generated in the United States, Ni-Cd batteries accounted for 75 percent of the cadmium found in municipal solid waste in 1995. Similarly, SSLA batteries accounted for 65 percent of the lead found in municipal solid waste in 1995.

When introduced into the environment through landfill disposal or incineration, these heavy metals make their way into the food chain. The presence of these heavy metals in the food chain presents very serious consequences. The possible health effects associated with ingestion or inhalation of heavy metals through water, food, or air include headaches, abdominal discomfort, seizures, and comas. Additionally, several heavy metals, such as cadmium, are known carcinogens.

The Battery Act removes certain barriers to the recycling of Ni-Cd, SSLA, and other rechargeable batteries. Prior to passage of the Battery Act, a battery recycling program spanning

across several states had to comply with varying, and sometimes conflicting, state labeling and waste management regulations.

Recycling programs for Ni-Cd and SSLA rechargeable batteries can significantly reduce the dangers these batteries pose to human health and the environment by diverting them from landfills and incinerators. Once the rechargeable batteries arrive at the recycling facility, the heavy metals are recovered during the recycling process and the remainder of the product is recycled or discarded safely.

Key Battery Act Terms Defined

Regulated batteries are rechargeable Ni-Cd and SSLA batteries, as well as rechargeable batteries found in consumer products like cellular phones and laptop computers. EPA may expand the scope of regulated batteries if it determines that batteries other than Ni-Cd and SSLA batteries are toxic and may cause substantial harm to human health and the environment if land disposed

or incinerated.

Rechargeable batteries are those batteries with one or more voltaic or galvanic cells, electrically connected to produce electric energy, that are designed to be recharged for repeated uses. This definition also includes any type of enclosed device or sealed container consisting of one or more such cells, including what is commonly called a battery pack.

The Battery Act exempts from the definition of "rechargeable battery":

- Lead acid batteries used to start an internal combustion engine or as the principal electrical power source for a vehicle;

- Lead acid batteries used for load leveling or for storage of electricity generated by an alternative energy source, such as a solar cell or wind-driven generator;

- A battery used as a backup-power source for memory or program instruction storage, timekeeping, or any



Labeling Requirements

Labeling requirements in Title I of the Battery Act include the following:

1. Regulated batteries must bear the three chasing arrows or a comparable recycling symbol.
2. Regulated nickel-cadmium batteries must be labeled "nickel-cadmium" or "Ni-Cd," with the phrase "BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY."
3. Regulated lead-acid batteries must be labeled "Pb" or with the words "LEAD," "RETURN," and "RECYCLE" and, if the regulated batteries are sealed, the phrase "BATTERY MUST BE RECYCLED."
4. Rechargeable consumer products containing Ni-Cd batteries that are not easily removable must be labeled with the phrase "CONTAINS NICKEL-CADMIUM BATTERY. BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY."

5. Rechargeable consumer products containing regulated lead-acid batteries that are not easily removable must be labeled with the phrase "CONTAINS SEALED LEAD BATTERY. BATTERY MUST BE RECYCLED."

6. The required labeling also must be carried on the packaging of rechargeable consumer products containing regulated batteries that are not easily removable, and on the packaging of regulated batteries that are sold separately from such products, if the labeling on the product or battery is not visible through the packaging.

7. Battery and product manufacturers may apply for EPA certification to use a different label that conveys the same information as described above or conforms with a recognized international standard that is consistent with the overall purposes of the Battery Act. (Up until May 13, 1998, no certification was needed if the label was in "substantial compliance" with the labeling requirements.)



similar purpose that requires uninterrupted electrical power in order to function if the primary energy supply fails or fluctuates momentarily; or

- A rechargeable alkaline battery.

Rechargeable consumer products are products that, when sold at retail, include a regulated battery as a primary energy supply and are primarily intended for personal or household use. Examples of products for "personal or household use" include cellular phones; laptop computers; cordless power tools, personal computers, and video cameras. The products include external uninterruptible power source (UPS) devices that enable electrically powered devices to continue to operate temporarily in the event of a power outage.

Rechargeable consumer products do not include an internal uninterrupted power supply (UPS) device. Such products use a battery solely as a source of backup power for memory or program instruction storage, time-keeping, or any similar purpose that requires an uninterrupted electrical power in order to function if the primary energy supply fails or fluctuates momentarily. Internal UPS devices and their batteries are also exempt from the Act's definition of "rechargeable battery".

Easily removable means that regulated batteries must be detachable or easily removable from a rechargeable consumer product at the end of the life of the battery, by a consumer using common household tools (see box on right for more information).

Mercury Batteries

The Battery Act also phases out the use of batteries that contain mercury. Mercury has been found to be extremely harmful to human health and the environment. Title II of the Act

prohibits any person from selling, offering for sale, or offering for promotional purposes the following batteries:

- Alkaline-manganese batteries that contain mercury that was intentionally introduced (as opposed to mercury that may be incidentally present), except for button cells that contain up to 25 mg of mercury;

- Zinc-carbon batteries that contain mercury that was intentionally introduced;

- Button cell mercuric-oxide batteries; and

- Other mercuric oxide batteries, unless the manufacturer or importer does the following: identifies a collection site for recycling or proper disposal of the batteries; informs the purchasers of the collection site; and provides the purchasers with a phone number for obtaining information about sending the batteries for recycling or proper disposal.

Battery Act Enforcement

EPA may issue an order to violators of the Battery Act. The order may assess a civil penalty and/or require compliance. An order may require the violator to pay a civil penalty of not more than \$10,000 for each Battery Act violation. The Agency may also impose a \$10,000 penalty on a person who fails to take timely corrective action required under an order. The Agency also may bring a civil action for violations of the Act or noncompliance with an order.

For more information on the Battery Act, contact Lynn Holloway, RCRA Enforcement Division, Office of Regulatory Enforcement, (202) 564-4241; Email: holloway.lynn@epa.gov.

For compliance assistance information, contact Gloria Lowe, Office of Compliance, at (202) 564-2181; Email: lowe.gloria@epa.gov.

'Easy Removability' Requirement

The Battery Act prohibits the sale in the United States of a rechargeable consumer product that contains a regulated battery that is not easily removable from the product. This means that consumers must be able to easily remove the regulated battery at the end of its life, by using common household tools. In 1999, EPA took an enforcement action against a company that manufactured and sold 60,000 units of an external uninterruptible power supply (UPS) device containing a small sealed-lead acid battery. The device had been distributed, offered for sale, and sold at retail without battery removal instructions and without the words "**Contains sealed lead battery. Battery must be recycled**" on the product or the product packaging. The User's Guide for the UPS device contained precautions that should be taken during battery removal and replacement, such as using tools with insulated handles and wearing rubber gloves and boots.

EPA determined that under Section 3(6)(A) of the Act, the UPS device was a rechargeable consumer product that was being sold in violation of the easy removability and labeling requirements in Section 103. The company agreed to provide past, present and future customers with instructions on battery removal; to edit the User's Guide to remove unnecessary provisions that would deter consumers from removing or replacing the battery; and to post information concerning the requirements of the Battery Act on its website. Since any benefit gained by these violations was minimal, and since the company eagerly complied with the Act when cited by EPA, the Agency waived the civil penalty in this case.



United States
Environmental Protection Agency
Office of Regulatory Enforcement
(2248A)
Washington, D.C. 20460
Official Business
Penalty for Private Use \$300

'Enforcement Alert' newsletter

Battery Recycling and Collection Programs

The Rechargeable Battery Recycling Corporation (RBRC), a nonprofit organization representing many rechargeable battery manufacturers, developed the Charge Up to Recycle! program to help keep Ni-Cd batteries out of the solid waste stream and prevent toxins from ending up in landfills or municipal incinerators.

The Charge Up to Recycle! program offers various recycling plans for communities, retailers, businesses, and public agencies. For each group, RBRC pays or shares the cost of consolidating the batteries, shipping them to the processing facility, and recycling them. The program sends all Ni-Cd batteries to the International Metals Reclamation Company, a cadmium recovery facility in Ellwood City, Pa. At the facility, the nickel and iron are separated from the cadmium and shipped to specialty steel producers for use in stainless steel products. The recovered cadmium, at a 99.95 percent purity level, is used to produce new Ni-Cd rechargeable batteries. For more information about the Charge Up to Recycle! program, or for information about a local collection site, visit <http://www.rbrc.com> or call RBRC's toll-free number at 1-800-8-BATTERY.

The State of Massachusetts has worked with the RBRC to establish collection points for Ni-Cd batteries in more than 100 of the state's 351 municipalities. For more information about battery recycling efforts in Massachusetts, contact the Massachusetts Department of Environmental Protection Household Hazardous Waste Hot Line at 1-800-343-3420 (Massachusetts residents only. Out-of-state callers may call (617) 292-5704).

To encourage the recycling of commercial SSLA batteries, the manufacturers of SSLAs and products that contain them, with support from the Portable Rechargeable Battery Association (PRBA) and the Battery Council International (BCI), have established a collection program for commercial SSLA batteries in Florida, Iowa, Maryland, Minnesota and New Jersey. For more information about the commercial SSLA battery recycling program, contact the PRBA at (770) 612-8826.

Useful Compliance Assistance Resources

Office of Enforcement and Compliance Assurance:

<http://www.epa.gov/compliance/>

The Battery Act:

<http://www.epa.gov/epaoswer/hazwaste/state/policy/pl104.txt>

Implementation of the Mercury-Containing and Rechargeable Battery Management Act:

<http://www.epa.gov/epaoswer/hazwaste/recycle/battery.txt>

Universal Waste Rule:

<http://www.epa.gov/epaoswer/hazwaste/id/univwast.htm>

Audit Policy Information:

<http://www.epa.gov/oeca/ore/apo/guid.html>

National Compliance Assistance Clearinghouse:

<http://cfpub.epa.gov/clearinghouse/>

Compliance Assistance Centers:

<http://www.assistancecenters.net>

—Automotive Service and Repair:

<http://www.ccar-greenlink.org>

—Transportation:

<http://www.transource.org>

Small Business Gateway:

http://www.epa.gov/smallbusiness/major_environmental_laws.htm