

Increased Battery Usage Raises Disposal Issues

By Mr. Mike Walker

Batteries are a critical component in many weapon systems and support equipment. Without power, the system is useless. The Army's current equipment power requirements have pushed battery usage to its highest level. Our forces have come within "days" of running out of batteries, and major combat operations could have ceased or been significantly changed without battery support.¹ By April 2003, production of the BA-5590 battery increased from 60,000 to nearly 125,000 per month. The companies went from two shifts a day for 5 days a week to operating 24 hours a day, 7 days a week just to keep up with the military's demand. It was estimated that of the combined four services, the actual battery usage was 180,000 batteries per month in Iraq. To fill the demand, the next generation of rechargeable, also referred to as "secondary" batteries, was introduced to the battlefield to supplement traditional nonrechargeable "primary" batteries. Rechargeable batteries were previously reserved for training use only because of charging constraints.

One battery type will not fit every component, nor are the procedures for disposal all the same. Because the responsibility of properly disposing of or recycling batteries can be confusing, the US Army Communications-Electronics Command (CECOM) created Technical Bulletin 43-0134, *Battery Disposition and Disposal*. Additional information, battery updates, and several battery Material Safety Data Sheets (MSDSs) are provided on the CECOM Web site at <<http://www.monmouth.army.mil/cecom/safety/sservice/bs.htm>>.

Some batteries are considered nonhazardous waste when fully discharged; others, due to their composition, are considered hazardous waste even if fully discharged. When batteries are improperly disposed of, they can contaminate water supplies, create fires, and explode—if mixed with solid wastes and burned. Protecting the soldier is the primary reason to understand battery disposal guidelines, because the adverse effects of improper disposal become force health protection and safety issues later.

Command emphasis, planning, providing awareness training, and following a few easy rules will ensure that all batteries are properly maintained, handled, and disposed of:

- Refer to the batteries' MSDSs for safe handling procedures, storage, and disposal information. All batteries should not be treated the same.

- Train personnel on which batteries can be recharged and which cannot.
- Train personnel on which batteries can be disposed of as nonhazardous waste and which have to be turned in for disposal as hazardous waste.
- Include information in the unit standing operating procedures (SOP) concerning the handling, storage, and disposal procedures for all batteries used by the unit.
- Always replace batteries in pairs; don't mix old with new or rechargeable with nonrechargeable batteries.
- Never dispose of any battery in a fire or into waste that is scheduled to be burned. (This would include most solid waste at a forward operating base.)
- Require trained personnel to handle batteries that have a complete discharge device (CDD). After the CDD is depressed, the batteries must sit for 5 days.
- Completely discharge batteries before disposal.
- Rotate battery stock: first-in, first-out (FIFO).
- Establish battery charging procedures in the unit SOP, if rechargeable batteries are used. Some batteries retain memory; if not completely discharged before recharging, they will lose charging life.

Properly maintaining batteries will ensure weapon systems and support equipment readiness. The increased use of rechargeable batteries will reduce the overall amount of used batteries generated. Providing awareness training and leadership emphasis on battery disposal procedures will ensure that batteries do not become a force health protection issue.



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Endnote

¹ Geoff S. Fein, "Battery Supplies Ran Dangerously Low in Iraq," *National Defense*, September 2003, pp. 16-19.