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WASTE MANAGEMENT OPTIONS FOR ZINC-CARBON BATTERIES

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

May 6, 1993

Mr. J. W. Eggenberger, Director
Directorate of Disposal Management
and Environmental Protection
Defense Reutilization and Marketing Service
Defense Logistics Agency
74 N. Washington
Battle Creek, Michigan 49017-3092

Dear Mr. Eggenberger:

Thank you for your letter of March 11, 1993, asking for assistance in identifying waste management options for zinc-carbon batteries that show low levels of leachable cadmium. This letter summarizes several conversations between Mr. Jose E. Labiosa of my staff and Mr. Randy Smith of your staff.

Current land disposal restrictions apply only to those cadmium wastes that leach cadmium above 1.0 mg/l, as measured by EP Toxicity Test. Wastes that leach cadmium above 1.0 mg/l, as measured solely by the TCLP, and that show cadmium levels below 7.0 mg/l, as measured by EP Toxicity Test, are currently not covered by the land disposal restrictions (see footnote 1).

Assuming your zinc-carbon batteries are D006 wastes that are prohibited from land disposal, we must first determine which treatment requirements are applicable. In particular, should you meet a treatment level in 40 CFR 268.41 or must these batteries meet the cadmium-battery recycling standard in 40 CFR 268.42 (a)? (See June 1, 1990, 55 Fed. Reg. (22562-22563).)

Zinc-carbon batteries are not subject to the cadmium-battery recycling standard. This determination is based on the information provided in the BDAT background Document for D006 and in comments supporting the June 1, 1990 rule. EPA's BDAT Background Document

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for D006 explicitly identifies on pages 2-6 three kinds of cadmium batteries subject to the recycling standard: cadmium-nickel, cadmium-mercury, and cadmium-silver cells. Comments from the National Electrical Manufacturers Association supported the recyclability of these types of cadmium batteries (see enclosed comment submitted on January 8, 1989, public comment number LD12-00218). Based on this information, EPA did not intend to include zinc-carbon batteries as part of the Cadmium Batteries treatability group. As a result, the treatment standard for D006 wastes based on stabilization (in 40 CFR 268.41) is applicable to your wastes.

Although the recycling standard is not mandated for zinc-carbon batteries, you are not precluded from recovering zinc from these batteries. Per your request, we are enclosing a list of domestic and foreign facilities that recycle wastes containing high levels of zinc (albeit, mostly electric furnace dusts). It is our understanding that some of these recyclers can tolerate some levels of cadmium in the wastes. We certainly encourage the use of recycling technologies over stabilization technologies in order to reduce our dependency on land disposal.

If you have any questions regarding this determination, please contact Mr. Richard Kinch, Chief of the Waste Treatment Branch, at (703) 308-8434 or Mr. Jose E. Labiosa, Staff Engineer, of the Waste Treatment Branch, at (703) 308-8464.

We trust this information will be helpful in assessing your waste management options for your zinc-carbon batteries.

Sincerely,
Sylvia K. Lowrance, Director
Office of Solid Waste

- 1 If your zinc-carbon batteries are hazardous solely because of cadmium levels above 1.0 mg/l (as measured by TCLP), EPA considers these wastes newly identified cadmium wastes and therefore these wastes are not subject to the existing land disposal restrictions. See 40 CFR 268.1(e)(3). EPA will, however, be proposing treatment standards for newly identified TCLP wastes later this year.

Enclosures:

- (1) Comment LD12-00218
- (2) List of Zinc Recovery Facilities