

Andy Lawrence, Director  
Office of Environmental Policy and Guidance  
Department of Energy  
Washington, DC 20585

Dear Mr. Lawrence:

Thank you for your letter dated May 24, 2001 requesting clarification of the Land Disposal Restrictions (LDR) treatment standard for discarded radioactive contaminated lead acid batteries. As you know, the LDR treatment standard must be met before hazardous waste may be land disposed. There are three subcategories under the LDR treatment standard for lead: numerical treatment standards are required for general wastes exhibiting the lead toxicity characteristic (TC); lead recovery (i.e., smelting) is required for lead acid batteries; and macroencapsulation is required for radioactive lead shielding and other elemental forms of lead.

You explained that several Department of Energy facilities manage drained, lead acid batteries which are radioactively contaminated. These batteries display the TC for lead. You asked whether you should apply the LDR treatment standard that requires lead recovery, or the one that requires macroencapsulation of radioactive lead shielding and other forms of elemental lead.

We agree with you that the appropriate treatment standard is macroencapsulation. This treatment standard applies not only to lead shielding, but to other elemental forms of lead. Thus, there is latitude in the treatment standard to permit its application to radioactive lead acid batteries. We also believe that macroencapsulation is appropriate because it would require less worker handling than lead recovery, and we want to minimize worker exposure to radioactivity. Furthermore, lead recovery of these batteries would radioactively contaminate the entire mass of lead that was recovered, making it unusable.

I hope you find this information helpful. Do not hesitate to contact me if you have questions.

Sincerely,

Elizabeth A. Cotsworth, Director  
Office of Solid Waste

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