

PPC 9441.1992(17)

DESIGNATION OF AMERICIUM BERYLLIUM SOURCES UNDER RCRA

United States Environmental Protection Agency
Washington, D.C. 29460
Office of Solid Waste and Emergency Response

June 16, 1992

Roger L. Scott, Manager
National Low-Level
Waste Management Program
EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

Dear Mr. Scott:

Thank you for forwarding your report entitled "Designation of American Beryllium Sources under RCRA" to the Office of Solid Waste. We greatly appreciate your effort in characterizing americium beryllium (AmBe) sealed source wastes. The resolution of the issue is important, because as you indicate, there are several thousand discarded sealed sources which may enter the radioactive waste stream annually. My staff in the Permits and State Programs Division and the Characterization and Assessment Division have reviewed the report, and view it as a very thorough and well done report.

As a general matter, we agree with your tentative determination that AmBe sealed sources are not hazardous under the Resource Conservation and Recovery Act (RCRA). As your report suggests, discarded AmBe sealed sources would not be P-listed commercial chemical product or chemical intermediate wastes, despite their beryllium content (P015), since the commercial chemical product listings in 40 CFR 261.33 do not extend to manufactured products which are discarded after their end use. In addition, we agree that there would not be any corrosive, ignitable, or reactive properties associated with these sealed sources, nor do we expect stainless steel casings to fail the Toxicity Characteristic (TC). Situations that may cause stainless or specialty steel components (NI, CR) to fail the TC are where a pipe or piece of machinery takes a physical beating (e.g., is etched) by material LSI contact with it.

It is less clear whether the solder will pass the TC. Given the safety concerns with mixed wastes, a combination testing/mass balance approach may be appropriate to characterize solder from sealed sources. Either information on the composition of the solder, or TCLP testing (on a non-radioactive sample) would be a starting point. Then, based upon the percentage of the whole material that is solder, a "theoretical" TCLP concentration may be determined, using an assumption of no contribution of TCLP

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constituents from the non-solder portion of the waste.

It also appears to be unlikely that any trace amounts of TC metals in the americium and beryllium will cause the sealed sources to fail the TC unless there is a large amount of Am or Be in the capsule.

My staff offers the following specific comments on your report:

1. On page II-3, Figure II-1, the third decision in the series asks " Is the Waste Listed a P or U Waste in 40 CFR 261.33? The decision to the right of the triangle says "Yes or Maybe". We suggest you remove the word maybe because it is vague and not explained.
2. On page II-5, Section 2.1.3, the last sentence refers to identifying "beryllium powder" as a P015 waste. We suggest you delete the word "powder" since P015 is designated as "beryllium" not "beryllium powder" in 40 CFR 261.33.
3. On page II-6, in the last paragraph, you may want to mention that discarded beryllium residues generated during the manufacturing process for sealed sources may be considered P015 wastes.
4. On page II-8, we suggest you delete the word "powder" in the second full paragraph for the reason set forth in comment 2.

Again, I commend the thoroughness of your effort to characterize discarded Americium Beryllium sealed sources as potential mixed waste streams. While we agree generally with the conclusions you have reached under the Federal RCRA requirements, I should remind you that States authorized under RCRA for mixed waste may have more stringent hazardous waste regulations than the Federal requirements. Should you have additional questions, please call Richard LaShier or Susan Jones at (202) 260-2210.

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