



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1  
JOHN F. KENNEDY FEDERAL BUILDING  
BOSTON, MASSACHUSETTS 02203-0001

file copy

December 9, 1998

Ms. Linda A. Swift, Senior Environmental Scientist  
Capaccio Environmental Engineering, Inc.  
75 Union Avenue  
Sudbury, MA 01776-2255

Subj: Classification of Unused Integrated Circuits

Dear Ms. Swift:

This letter is in response to your November 4, 1998 request for a RCRA regulatory interpretation on unused "scrap" integrated circuits.

40 CFR 261.1(c)(4) states: "A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated." In your letter, you indicate that the unused integrated circuits are sent off-site for reclamation of precious metals and lead.

A solid waste is defined at 40 CFR 261.2(a)(1) as "...any discarded material that is not excluded by 261.4(a) or that is not excluded by variance granted under 260.30 and 260.31." 40 CFR 261.2(a)(2)(ii) goes on to state: "A discarded material is any material which is recycled, as explained in paragraph (c) of this section." Paragraph (c)(3) of 40 CFR 261.2 then states: "Materials noted with a "\*" in column 3 of Table 1 are solid wastes when reclaimed."

In Table 1, the unused scrap integrated circuit would be included in the category of "commercial chemical products listed in 40 CFR 261.33", even though it is not a listed waste in 40 CFR 261.33. This is because EPA considers listed and non-listed commercial chemical products to be of the same regulatory status (see Federal Register Vol. 50, No. 70, Page 14219, April 11, 1985). According to Table 1 of 40 CFR 261.2, commercial chemical products are not a solid waste when reclaimed. Therefore, since unused scrap integrated circuits are non-listed commercial chemical products, from the federal standpoint they are not solid wastes under RCRA when they are processed to reclaim precious metals and lead. However, the Massachusetts Department of Environmental Protection (MA DEP) regulations may contain more stringent requirements. You should contact James Patterson of the MA DEP at 617/556-1096 to determine what state requirements are imposed on unused scrap integrated circuits.

The May 12, 1997 Federal Register (Vol. 62, No. 91, Pages 25998-26040) contains the final rule for Phase IV of the Land Disposal Restrictions (LDR) including exemptions from RCRA for certain processed materials (i.e., processed circuit boards). Although the rule applies to used printed circuit boards and your request pertains to unused integrated circuits, the rule should serve as guidance in the handling of unused integrated circuits. The rule states in paragraph VIII.B.1 on Pages 26011-26012:

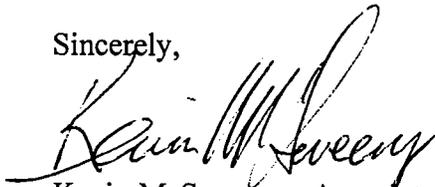
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**“The proposed exclusion was conditioned on the storage of the shredded circuit boards in containers prior to recovery that would be adequate to prevent a release of the boards to the environment. .... EPA is finalizing this exclusion as proposed with an additional limitation that shredded circuit boards excluded from RCRA jurisdiction be free of mercury switches, mercury relays, nickel-cadmium batteries, and lithium batteries (emphasis added).”**

One final point: the residual materials which are generated during reclamation would be subject to solid and hazardous waste determinations at the point of generation.

If you have any questions about this regulatory interpretation letter, please contact Marina Cronin of my staff at (617) 918-1575.

Sincerely,



Kevin McSweeney, Associate Director for Waste Policy  
Office of Ecosystem Protection

cc: Jim Miller, MA DEP  
Leo Hellested, RI DEM  
Stacy Ladner, ME DEP  
John Duclos, NH DES  
Dave Sattler, CT DEP  
Peter Marshall, VT DEC  
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