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

July 15, 1994

Mr. Scott Tease
Technical Representative
HUBBARD-HALL INC.
P.O. Box 969
Inman, South Carolina 29349

Reference: Applicability of Hazardous Waste Codes to
the LASER EX chemical polishing system

Dear Mr. Tease:

This responds to your letter dated June 15, 1994, requesting an interpretation of the potential applicability of hazardous waste codes to your process for chemical polishing.

It is our understanding, that LASER EX is a peroxide-based chemical polishing system, which entails the chemical oxidation of the surfaces of brass and copper alloys as the final step after production and prior to plating, lacquering, antiquing, or assembly. Specifically the process dips parts to be chemically polished in an oxidative chemical bath. The actual process entails an aqueous wash followed by a sulfuric predip, the LASER EX bath, and a sulfuric acid post dip. A cold water rinse is performed between each step. The process reportedly does not employ electroplating or use cyanides.

Based on the information you have provided us, the process does not employ electroplating or the use of cyanides and is separate and distinct from any such operations. Such process wastes are not within the scope of the wastes listed in 40 CFR Part 261 Subpart D. However, solid wastes which are not listed hazardous wastes in 40 CFR Part 261 Subpart D, may also be classed as hazardous wastes, if they exhibit any of the characteristics of a hazardous waste found in 40 CFR 261 Subpart C.

For example, based on the reported compositions of the baths it

is possible for waste baths or rinses containing sulfuric acid to exhibit the characteristic of corrosivity (40 CFR 261.22). Aqueous wastes which have a Ph less than or equal to 2 or greater than or equal to 12.5 must be managed as EPA Hazardous Waste Number D002. In the case of the LASER EX bath and subsequent washes, these waste baths and subsequent rinses may exhibit the characteristic of ignitability and would require management as EPA Hazardous Waste Number D001 (40 CFR 261.21). This is because the bath contains the inorganic oxidizer hydrogen peroxide, which is capable of severely exacerbating a fire once started by yielding oxygen to stimulate the combustion of organic matter. Once the hydrogen peroxide has been chemically decomposed, the wastes would no longer exhibit the ignitability characteristic due to the presence of an oxidizer. Wastes which are hazardous because they exhibit one of the 40 CFR 261 Subpart C characteristics of hazardous waste remain hazardous and subject to the regulations governing hazardous waste management, until they no longer exhibit the characteristic. However, as stated in the final sentence of 40 CFR 261.3 (d)(1), "wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of 40 CFR Part 268, even if they no longer exhibit a characteristic at the point of disposal."

The above discussion is limited to hazardous waste codes which are most likely to be produced in the LASER EX process, as described to us. This in no way limits the obligation of any waste generator to fully characterize solid wastes being generated (see 40 CFR 262.11) and to manage such wastes in accordance with all applicable federal or state regulations. States may impose regulations more stringent than the federal program. Therefore, you should also consult the local RCRA regulatory authority for where the process is to be utilized.

Sincerely,

Rick Brandes, Chief
Waste Identification Branch

HUBBARD-HALL INC.
P.O. Box 969
Inman, South Carolina 29349

June 15, 1994

Mr. Michael H. Shapiro
Office of Solid Waste
United States Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Dear Mr. Shapiro:

I am writing you to request a ruling on the waste classification of a new chemical process. We have named our newest chemical polishing system the Laser EX; it is based on hydrogen peroxide and a stabilizer package. The polish is intended for use on brass and copper alloys. I have already met with Max Diaz on the line, his initial response was that the waste should not need to be classified as long as the sludge produced in waste treatment passes a leech test. I have given him much more information than I can include in this short letter.

The Laser EX process is very simple. It involves an aqueous clean, a sulfuric predip, the Laser dip step, and a sulfuric acid post dip. There is cold water rinses in between each step; it is the waste that is carried over-into these rinses that we need the ruling on. I have included with this letter a product data sheet and an M.S.D.S. for more information.

Unlike most peroxide based systems, this system does not etch the surface. Rather, it oxidizes the surface to form a protective brown copper oxide coating over the alloy. When we remove this dark brown oxide film a bright, leveled, and very clean surface is the result. Some examples of where the Laser EX may find uses is as the final step after production prior to plating, lacquering, antiquing, or assembly. Laser can take the place of hand buffing which leaves a very difficult soil to clean off the part. The Laser EX is also a good replacement for strong acid mix bright dips. There is no chance that there will be water carried over into this step from a plating solution. Laser EX does not use any electrical current for brightening. It may not effect your ruling but the system uses no chelators, cyanides, chromates, phosphates, or ozone deleting

solvents.

Mr. Shapiro, I would like to thank you in advance for your help. If there are any questions that you need answered please feel free to give me a call. You can leave me a voice mail message at (800) 632-5017 box #256, or you can contact me directly at (919) 217-8281. Along with the information on the Laser EX, I have included information on our company. We have been in business for over a century and a half; I hope you can tell by our literature that we are a responsible supplier. Again, thank you so much for your help. Please take care and God Bless.

Sincerely,

Scott Tease
Technical Representative

cc. Max Diaz