UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 18 1998

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. Don Pucci
Environmental Manager
Briggs & Stratton Corporation
Route 11, Box 20
Poplar Bluff, MO 63901

Dear Mr. Pucci:

This is in response to your recent letter addressed to the Office of Solid Waste, regarding an iron plating process being developed by your company. Your letter suggests that this new plating process be excluded from the F006 listing definition because it does not use any of the constituents (hexavalent chromium, cadmium, nickel, and complexed cyanide) for which electroplating wastewater treatment sludges were listed as F006 hazardous waste.

Please be advised that the existing exemption of the F006 definition for "aluminum or zinc-aluminum plating on carbon steel" may not be automatically extended to "steel plating on aluminum" as you suggested. Also be aware that changing a regulation to exclude a particular process from the listing descriptions is a national action and requires a formal rulemaking. Such a rulemaking may require substantial data collection and evaluation to determine whether wastes resulting from the particular process in the industry are in effect non-hazardous. Nevertheless, industry-wide electroplating technologies may differ, and their wastewater treatment sludges may significantly vary in both volume and characteristics. Your letter further contends that Briggs & Stratton's proposed iron-plating process should be excluded from the F006 definition because the process employs an iron-based electrolytic solution without using chromium, cadmium, nickel, or cyanide, and only iron and aluminum would be present in the wastewater treatment sludge. However, there is no information and data supporting your claim; and it is unclear if the iron-plating process rinsewaters will be combined and co-treated with any other wastewaters (which may contain hazardous constituents) to generate a hazardous treatment sludge.

Presently, wastewater treatment sludges from electroplating processes that fall within the scope of the F006 listing descriptions but are not specifically exempted are F006 hazardous wastes regardless of their actual composition and constituent concentrations. Therefore, the sludges would not need to contain significant concentrations of the hazardous constituents of concern (not limited to chromium, cadmium, nickel, and cyanide) to remain listed as F006.

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However, the Agency can remove individual wastes from hazardous waste listings, through a procedure that acknowledges the variability inherent in industry processes. The Congress provided a delisting mechanism in the Solid Waste Disposal Act (as amended by the Hazardous and Solid Waste Amendments of 1984, in Section 3001), and this mechanism has been incorporated into the hazardous waste regulations under 40 CFR 260.20 and 260.22. In short, delisting provides a targeted exemption from hazardous waste regulations to deserving facilities (i.e., whose wastes may truly be non-hazardous) while protecting human health and the environment by retaining hazardous waste streams. Recently, the Agency redelegated the delisting authority to EPA Regions in order to make more timely responses to delisting petitions. Moreover, approximately nineteen States are presently authorized to administer a delisting program in lieu of the federal program. If you are interested in submitting a delisting petition, please contact Mr. Ken Herstowski, Region VII delisting coordinator, on (913) 551-7631.

If you have further questions concerning this matter, please feel free to call Chichang Chen of my staff at (703) 308-0441.

Sincerely,

David Bussard, Director
Hazardous Waste
Identification Division

BRIGGS & STRATTON

BRIGGS & STRATTON CORPORATION

Rec'd 6/30/9
Discussed
with Rick 8/5/

Office of Solid Waste
Hazardous Waste Identification Division
401 M Street, SW (5304)
Washington, D.C. 20460

Dear Sirs,

The Briggs and Stratton Corporations Poplar Bluff, Missouri facility currently utilizes a Hard Chromium plating operation during the manufacture of aluminum pistons for use in our product. A cyanide-based zincate, and a nickel strike are employed prior to electrodeposition of chrome. We currently generate a wastewater treatment sludge which meets the definition of an F006 listed waste under 40 CFR 261.31(a).

Recently, in keeping with our commitment to waste minimization, Briggs and Stratton has been actively developing an alternative plating process. This process employs an iron-based electrolytic solution from which iron is electrodeposited directly on to the basis material (aluminum). No cyanide, zinc, nickel or chromium are used anywhere in this operation.

The environmental benefits resulting from the successful transition from hexavalent chromium to iron plating are significant. The treatment of rinses containing toxic metals, or cyanide using standard alkaline precipitation would no longer be necessary.

Subsequently, Briggs and Stratton contends that the sludge generated from treatment of iron rinses should not be considered a listed waste. The rationale for this contention as follows:

> The definition of F006 includes wastewater treatment sludges from electroplating operations. Certain processes are exempted however because sludge from these processes is not expected to contain significant concentrations of toxic metals or cyanides. Treatment sludges generated from these processes are consequently not listed wastes. They would be hazardous wastes only if they fail for one of the characteristics as defined in 40 CFR 261, 21, 22,23 or 24.

Therefore, it is reasonable to conclude that any residual generated from the treatment of rinses employed in the plating of carbon steel on aluminum would logically fall under exemption #4 of the F006 definition. This exemption excludes aluminum or zinc-aluminum plating on carbon steel, so it should extend to steel plating on aluminum. To further support this contention please consider the following:

In referencing the original U.S. EPA Background document from the listing of F006 plating wastes it is apparent that the basis for listing these wastes is the fact that sludges could potentially contain toxic metals such as cadmium, chromium and nickel as well as complexed cyanides. In addition, since the efficiency of the removal of

Mailing Address: Route 11, Box 20 Poplar Bluff, MO 63901 Telephone 573 / 686-3004 Facsimile: 573 / 686-2140
Corporate Offices: 12301 West Wirth Street, Wauwatosa, Wisconsin 53222-2110 Telephone: 414 / 259-5333 Facsimile: 414 / 259-5338

hexavalent chromium depends on the extent of its reduction it was felt that if neutralization and metal precipitation occurred too rapidly it was likely that hexavalent chrome would be entrained in the precipitation sludges.

The Extraction Toxicity Procedure was employed in leaching tests performed under a grant from Industrial Environmental Research Laboratory (I.E.R.L.) U.S. Environmental Protection Agency. These tests indicated that these toxic metals would leach out in "significant concentration". Once release of cyanide, cadmium, chromium and nickel occurred migration from the disposal site to the ground and surface water could occur.

Based on the above information in conjunction with the nondegradability of these heavy metals, the questionable disposal practices employed by industry at the time, and the anticipated volume of future sludge generation the agency decided to list wastewater treatment sludges on the basis of chromium, cadmium, nickel and cyanide content.

In contrast, the proposed Briggs and Stratton iron process does not employ any of these metals. In addition, no cyanide is present in the process. Only iron and aluminum will be present in the sludge.

Therefore, we hope you will concur with our contention that exclusion #4 of the F006 definition codified at 40 CFR 261.31(a), extends to our proposed process.

Please feel free to contact me if additional information is necessary.

Sincerely,

Don Pucci
Environmental Manager (SED/UED)

xc: P. Hanz
Director of Environmental Compliance