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

December 20, 1994

Mr. David J. Monz
Updike, Kelly & Spellacy, P.C.
Counselors at Law
One State Street
P.O. Box 231227
Hartford, Connecticut 06123-1277

Dear Mr. Monz:

Thank you for your letter dated November 9, 1994, requesting an interpretation from EPA regarding the regulatory status of an air pollution control dust (i.e., baghouse dust) that is fed to an electrolytic metals recovery process to recover zinc metal. You state that you consider the material to be excluded from RCRA regulation under §261.2(e) as a secondary material that is being 1) used as an ingredient in an industrial process to make a product, and/or 2) used or reused as an effective substitute for a commercial product.

You are correct in your interpretation that the baghouse dust would not be subject to regulation under RCRA when used in this manner, but you are incorrect in your assessment as to why RCRA would not apply in this case. The exclusions provided under §261.2(e) for materials that are recycled as ingredients or effective substitutes are applicable only if the materials are not being reclaimed. The process you describe clearly involves reclamation of zinc and other metals from a secondary material and would therefore not qualify for exclusion from RCRA regulation under §261.2(e). Instead, based on the information provided in your letter, the baghouse dust would be excluded from RCRA regulation under §261.2(c)(3) as a characteristic sludge being reclaimed. A sludge, as defined under §260.10 of RCRA, is "any solid, semi-solid, or liquid waste generated from a municipal wastewater treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant."

It is important to note, however, that EPA Regions and States authorized to implement the hazardous waste program make determinations regarding the requirements that apply to specific materials and facilities. Also, some States have programs more stringent than the Federal hazardous waste program. To obtain a definitive determination regarding a specific site, you should submit your request to the appropriate State or Regional authority. If you have additional questions regarding application of the RCRA regulations as they pertain to this case or in general, please contact Becky Daiss at (202) 260-8718.

Sincerely,

Michael J. Petruska, Chief
Regulatory Development Branch

Attachment

Updike, Kelly & Spellacy, P.C.
Counselors at Law
One State Street
P.O. Box 231227
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VIA FIRST-CLASS MAIL

November 14, 1994

Attn: Michael Shapiro, Director
Office of Solid Waste
United States Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20406

Re: Request for Regulatory Opinion
Recycling of Baghouse Dust Under the
Resource Conservation and Recovery Act

Dear Mr. Shapiro:

On November 9, 1994, we transmitted to you a request for a regulatory opinion regarding the recycling of baghouse dust under the Resource Conservation and Recovery Act. In the interim, it has come to our attention that the request incorporated a bulk analysis of zinc concentrates that, although similar to the feedstock materials, did not derive directly therefrom. Accordingly, please regard the request dated November 9, 1994 as withdrawn and substitute therefor the instant request. We apologize for any inconvenience that this may have caused.

We hereby request an opinion as to whether a certain air pollution control dust (i.e., baghouse dust) that is generated by the operation of a brass furnace is excluded from the definition of solid waste pursuant to 40 C.F.R. §261.2(c)(3). 261.2(e) when it is directly used in a primary electrolytic refining process to produce special high grade zinc ingot and a variety of zinc alloys. It is our interpretation that, when used in the manner described below, the baghouse dust is recycled by being (1) used as an ingredient in an industrial process to make a product, and/or (2)

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used or reused as an effective substitute for a commercial product.

It is our understanding that the baghouse dust in question is generated by the operation of a brass furnace and is recovered via a dust collector. The unprocessed dust, along with other select secondary materials, is blended with primary feedstock materials by the refinery in a "roasting process," which is a preliminary step in an electrolytic refining process where preleached zinc sulfides are converted into calcine, a material that contains impure zinc oxide. The secondary materials, including the baghouse dust, are typically used as a 1-3 percent composite of the raw materials. We understand that the use of the secondary materials enhances the efficiency of the roasting process by maximizing the through-put that can be achieved at the appropriate operating temperature. High purity cadmium oxide and marketable residues containing silver and lead are recovered at a later stage in the refining process.

The primary feedstock materials are zinc concentrates from domestic mines and from mines in Mexico and Peru, which contain approximately 60% zinc, 30% sulfur, 1.5% lead and 0.5% cadmium by weight. A representative bulk analysis for the baghouse dust, which is derived from a Material Safety Data Sheet, is provided in full below:

Materials	%Wt.
Zinc, Total	72.5
Lead, Total	6.577
Cadmium, Total	0.058
Aluminum, Total	0.02
Antimony, Total	<0.004
Copper, Total	0.358
Iron, Total	0.027
Nickel, Total	0.002
Phosphorus, Total	0.001
Silicon, Total	0.005
Sulfur, Total	0.097
Sulfate, Total	0.152
Tin, Total	0.052

In addition, TCLP metals analysis for the baghouse dust revealed the following: Arsenic = <0.001 mg/L; Barium = <0.20 mg/L; Cadmium = 24.3 mg/L; Chromium = <0.01 mg/L; Lead = 378 mg/L; Mercury = 0.002 mg/L; Selenium = 0.023 mg/L; Silver = <0.01 mg/L.

It bears emphasis that the baghouse dust is not processed in any way prior to being blended with the zinc concentrates in the roasting process. In addition, the baghouse dust is consumed entirely by the refining process itself. Moreover, the subsequent recovery of high purity cadmium oxide and marketable metal residues containing silver and lead derives from the processing of both the zinc concentrates and the secondary materials. In other words, cadmium and lead are not recovered simply from the secondary materials.

Based on the language of 40 C.F.R. § 261.2(e), it is our interpretation that, when used in the electrolytic refining process as described above, the baghouse dust is recycled by being (1) used as an ingredient in an industrial process to make a product, and/or (2) used or reused as an effective substitute for a commercial product. This position is, in our opinion, buttressed by preamble language contained in the proposed hazardous waste management system rule, under which the following process, among others, is excluded from the definition of "reclamation":

[U]sing the materials as substitutes for raw materials in processes that normally use raw materials as principal feedstocks; this exception does include those situations where material values are recovered from these substitute materials. Examples are sludges or spent materials used as substitutes for ore concentrate in primary smelting. The Agency does not believe these processes constitute reclamation, in spite of the recovery or regeneration step, because the materials literally are being used as alternative feedstocks.

48 Fed. Reg. 14472, 14488 (April 4, 1983) (footnote omitted). We further believe that the use of the baghouse dust in the electrolytic refining process as described above constitutes bona fide recycling under the Criteria for Evaluating Whether a Waste is Being Recycled.

Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

David J. Monz
DJM/kmg