

PPC 9444.1986(33)

ELECTRIC ARC FURNACE DUST AFTER ENCAPSULATION  
TREATMENT PROCESS

DEC 29 1986

Honorable Lloyd Bentsen  
961 Federal Building  
Austin, Texas 78701

Dear Mr. Bentsen:

Thank you for your November 20, 1986, letter requesting information concerning the regulatory status of electric arc furnace (EAF) dust generated by the Bodner Metal and Iron Corporation of Houston, Texas, after treatment with Lopat Industries; K-20 encapsulation process. My office has reviewed the material supplied with the letter, and has concluded that the encapsulated EAF dust is still a hazardous waste under the Resource Conservation and recovery Act (RCRA) and should be managed as such.

The Texas Water Commission, in its letter of November 7, 1986 to Emanuel Bodner of Bodner Metal and Iron Corporation, was correct in its assessment of Bodner Metal and Iron's EAF dust. This EAF dust is a listed hazardous waste (EPA Hazardous Waste No. K061) under 40 CFR §261.32. The hazardous constituents for which this waste was originally listed are hexavalent chromium, lead, and cadmium. A listed waste must be handles as hazardous, even if treated, unless a regulatory exclusion ("delisting") is granted.

The delisting process requires detailed sampling and testing of representative samples of the waste generated a particular facility. Delisting decisions are based on the characterizations of the wastes generated at individual facilities.

The standards that a waste must meet to be delisted are more stringent than the standards set in the RCRA regulations for the hazardous waste characteristics. These characteristics (i.e., extraction procedure [EP] toxicity, reactivity, corrosivity, and ignitability) were established to bring non-listed wastes which exhibited any of these characteristics under hazardous waste regulation. After the promulgation of the Hazardous and Solid Waste Amendments of 1984 (HSWA), the Agency is now required to evaluate all wastes, for which a delisting is sought, for their originally listed constituents of concern and for any "Appendix VIII" hazardous constituents reasonably believe to be present in the waste, as well as the hazardous waste characteristics, in each delisting demonstration.

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It should be noted that the two series of EP toxicity tests performed on samples of treated EAF dust (the results presented with Mr. Bodner's letter of November 10, 1986) have produced leachate concentrations for lead that are too high to justify a delisting. The Agency uses a vertical and horizontal spread (VHS) dispersion model to aid in the evaluation of delisting petitions. This model uses leachate data and waste volume to predict potential impacts of a waste upon ground water. The EP leachate data for lead (1.6 and 3.6 mg/l) in the treated waste, as presented in the Bodner letter, will produce compliance-point concentrations which fail the VHS evaluation (i.e., the compliance-point values exceed the National Interim Primary Drinking Water Standard for lead of 0.05 mg/l). The Agency has required that other stabilization technologies employed in several other delisting petitions achieve EP leachate concentrations for lead below 0.3 mg/l. Several petitioners have been successful in achieving these leachate levels.

Although it would not change the regulatory status of the EAF dust the Agency does believe that encapsulation processes (such as the Lopat K-20 process) are useful in controlling the mobility of hazardous wastes and thereby decreasing the probability of environmental contamination. To assure that stabilizing treatment technologies will successfully bind constituents over the long term, the Agency requires stabilized wastes to be ground to a uniform 100-mesh particle size prior to chemical testing. This provides the Agency with a means of evaluating the waste for the potential effects of weathering or mismanagement.

I hope this information addresses your concerns. If you have any additional questions concerning the delisting of hazardous wastes, please contact Mr. Myles Morse, of my staff, at (202) 382-4782.

Sincerely yours,

Original Document signed "/s/ Jack W. McGraw for"

J. Winston Porter  
Assistant Administrator