

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

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Norman R. Reilly, Chief
Resource Recovery Section
Hazardous Waste Management Program
Department of Toxic Substances Control
Cal/EPA
400 P Street, 4th floor, P.O. Box 806
Sacramento, CA 95812-0806

Dear Mr. Reilly:

Thank you for your letter dated May 28, 1997 requesting clarification of the regulatory status of agglomerated drosses. On May 12, 1997, the U.S. Environmental Protection Agency (EPA) promulgated a final rule amending the federal definition of solid waste to exclude shredded circuit boards and excluded scrap metal (defined as "processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled from the definition of solid waste. You ask for an interpretation of the regulatory status of characteristically hazardous metal drosses under this new final rule for excluded scrap metal. I would like to clarify the scope of the exclusion and its applicability to metal drosses in order to address your concerns.

First, I would like to emphasize that the new rule does not affect the regulatory status of dross that has not been agglomerated. Dross which has not been agglomerated maintains its current regulatory status as a by-product and is a solid waste unless it is a characteristic by-product being reclaimed. Dross which has not been agglomerated is not a scrap metal. The Agency continues to maintain that the definition of scrap metal does not include residues generated from smelting and refining operations such as drosses, slags, and sludges. As the Agency explained in the January 4, 1985 preamble to Definition of Solid Waste final rule (50 FR 625) "scrap metal is also classified differently from metal-containing process residues such as slags, drosses, and sludges partly because it is different in physical form and content. More importantly, these residues can be involved in recovery operations that amount to on-going processing of the virgin materials and so are not invariable wastes when utilized for metal recovery.... this is not the case when scrap metal is recovered."

The May 12, 1997 final rule excludes processed scrap metal, unprocessed home scrap metal and unprocessed prompt scrap metal being recycled from the definition of solid waste. Obsolete scrap metal (that which has not undergone a processing step)

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remains a solid waste but is exempt from the hazardous waste regulations if recycled. It is important to realize that the new exclusion to the definition of solid waste for excluded scrap metal being recycled, as it relates to dross, only applies to dross which has been agglomerated. Key to this determination is the meaning of agglomerated dross. The Agency did not provide the meaning of agglomeration in the preamble to the rulemaking, but interprets this term to mean a dross that has the same physical characteristics as scrap metal i.e., "bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that are combined together with bolts and soldering . . ." Agglomerated drosses are solid chunks of metal in a physical state that does not allow them to be easily crushed, split or crumbled. Agglomerated drosses are generated from operations such as sintering and melting which result in a material that does not have elements that are easily dispersed. In the preamble to the final rule, EPA defined processed scrap metal as "scrap metal which has been manually or mechanically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes but is not limited to scrap metal which has been bailed, shredded, sheared, melted, agglomerated (for fines, drosses and related materials which are not scrap metal prior to agglomeration) or separated by metal type." Therefore, dross that has been agglomerated can be classified as processed scrap metal and, if recycled, is excluded from the definition of solid waste.

Additionally, the Agency intended that agglomerated dross from any source, not solely from scrap metal processing, that is being recycled, be excluded from the definition of solid waste. Agglomerated dross being recycled is classified as processed scrap metal despite not meeting the definition of scrap metal prior to processing (agglomeration). While the wording of the regulation is inexact on this point, it does not make sense to distinguish drosses based on their source. We agree with your assertion that the risks associated with metal drosses generally, are a function of their physical and chemical characteristics, and their handling, not of their origins. Therefore, the exclusion from the definition of solid waste applies to agglomerated dross from secondary metal processing as well as dross from primary metal processing.

Second, you request comment on the regulatory status of dross used in a manner constituting disposal under the new exclusion to the definition of solid waste for excluded scrap metal. Again, I must emphasize that the exclusion applies only to dross that has been agglomerated. If the dross is agglomerated and used in a manner constituting disposal, it would be a processed scrap metal being recycled and thus excluded from the definition of solid waste. However, dross that has not been agglomerated is a listed or characteristic by-product and therefore is a solid waste when used in a manner constituting disposal. Although the federal regulations provide, generally, that characteristic byproducts and sludges that are reclaimed are not solid waste, the regulations expressly override that result when these materials are 1) used in a manner constituting disposal; 2) used to produce products that are applied to the land; 3) burned for energy recovery, used to produce a fuel, or contained in a fuel; 4)

accumulated speculatively; or 5) considered inherently waste like. 40 C.F.R. §261.2(e)(2). Accordingly, metal-bearing characteristic byproducts and sludges that are reclaimed are solid wastes subject to the applicable Subtitle C regulatory requirements when the waste or reclaimed materials are then used or reused in a product (such as fertilizer) that is to be placed on the land (i.e., used in a manner constituting disposal). The Agency has consistently interpreted this provision to apply without regard to whether the byproduct or sludge as a whole (or some reclaimed portion of it) is used as a product that is placed on the ground or used to produce a product that is placed on the ground.

In your letter and in conversations with my staff you raise the concern that agglomerated drosses, which often contain hazardous constituents, will be used in the production of fertilizers which will be placed on the land. It is our understanding, based on discussions with fertilizer manufacturers, that agglomerated dross, as described previously, is not amenable to the production of fertilizers and would not be used for this purpose. Fertilizer manufacturers state that they are interested in metal oxides for their manufacturing processes. As agglomerated dross is primarily in the metallic state, use of agglomerated dross in fertilizers does not at this time appear to be economically feasible. Should the use of agglomerated dross for the manufacture of products used in a manner constituting disposal become commonplace practice, the Agency would likely initiate further investigation as to whether the dross in fact was agglomerated as described in this letter, and if so, whether this was legitimate use.

Because of concerns related to waste-derived fertilizers the Agency has convened a Workgroup that is currently investigating issues related to fertilizer, including the following:

- 1) potential human health and environmental impacts associated with the use of waste-derived and non-waste derived fertilizer;
- 2) the potential agricultural impacts associated with use of waste-derived and non-waste derived fertilizers;
- 3) the potential need to impose controls on waste-derived and non waste-derived fertilizers;
- 4) the role of enforcement and compliance initiatives; and
- 5) public communications initiatives.

The interpretations in this letter are based on federal regulations. Authorized states, such as California, may have more stringent regulatory requirements for such metal-bearing secondary materials. Accordingly, case-specific determinations should be made by the appropriate state regulatory authorities.

I hope this response clarifies the regulatory status of dross in its various physical forms. If you should require further clarification or additional information, please

contact Kristina Meson of my staff at (703) 308-8488. Thank you for your interest in the environmentally sound management of this waste stream.

Sincerely,

David Bussard, Director
Hazardous Waste Identification
Division