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

April 12, 1996

Mr. Randall A. Jones  
Director, Regulatory Affairs  
Molten Metal Technology  
51 Sawyer Road  
Waltham, MA 02154

Dear Mr. Jones:

This is in response to your July 21, 1995 letter to Stephen Bergman of my staff regarding MMT's proposal to use industrial hazardous and non-hazardous wastes as feedstock for your Catalytic Extraction Processing (CEP) unit to produce a synthesis gas. These wastes include but are not limited to RCRA-listed hazardous wastes such as chlorinated organic compounds FO24, KO19 and KO20. In your letter, you seek OSW concurrence on the following points:

"the CEP unit deployed in such an application is a legitimate recycling unit that is not subject to RCRA permitting requirements,

the secondary materials are 'used or reused' pursuant to 40 CFR §261.2(e)(1)(I), and

the CEP synthesis gas that meets established specifications for material use is a legitimate commercial chemical product with a variety of normal uses, including use as a fuel."

During its analysis, my staff has not attempted to make a determination as to its status as a legitimate recycling unit. Such a determination is made by the appropriate RCRA authorized state or EPA regional office. The CEP process, should it meet the established criteria in the judgement of the appropriate regulatory authority, would be considered a legitimate recycling operation. We are aware that the state of Texas recently reviewed your proposal to use a CEP unit to produce syngas from RCRA-listed hazardous waste at the Hoechst Celanese facility in Bay City,

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Texas and found it to be a legitimate recycling process subject to a number of conditions specific to the site. At the state's request, EPA provided input to Texas on the Agency's direction on comparable fuels, as discussed below.

This letter responds only to general regulatory questions regarding the CEP technology. Different regulations and site specific conditions in RCRA authorized states may dictate different outcomes at different sites.

#### Application of the "Use/Reuse" Provision

As I stated earlier, it is the responsibility of EPA regional offices or RCRA authorized states, using specific criteria related to a particular site, to determine whether or not a particular process is a legitimate recycling operation or whether it is a form of waste treatment. Once this determination is made, the state or EPA region could then determine whether or not the hazardous waste input meets the terms of the 40 CFR 261.2(e)(1)(I) "use/reuse" exemption.

This "use/reuse" provision exempts from the definition of solid waste materials that "can be shown to be recycled by being used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed..." This exemption does not apply if the product is either placed on the ground or burned for energy recovery. Therefore, as long as the products of the process are not burned for energy recovery or used in a manner constituting disposal (see "Status...When Used to Make a Fuel" below) and assuming the process is determined to be legitimate recycling, the materials used by the CEP unit to make the gas would not be regulated as solid waste. In such a case, the syngas would not be regulated as a hazardous waste derived product since the feedstock would no longer be regulated as a solid waste. Should both legitimacy of recycling and "use/reuse" be established, the CEP unit itself would be excluded from RCRA jurisdiction.

As for the status of residuals of the synthesis gas production process, those residuals that are not themselves listed and do not fail one of the hazardous characteristics, as described in 40 CFR Part 261 Subpart C, are not regulated as hazardous waste, providing that the findings mentioned above are made.

However, listed or characteristic residuals would be considered newly generated wastes subject to RCRA.

#### Status of the CEP When Used to Make a Fuel

The status of the feed materials changes when the output from the CEP is burned as a fuel, since the use/reuse provision does not apply when the hazardous waste feedstock is used to produce a fuel. According to 40 CFR §261.2(e)(2)(ii), "materials burned for energy recovery, used to produce a fuel, or contained in fuels...are solid wastes, even if the recycling involves use, reuse, or return to the original process..."

#### Comparable Fuels

Our current regulations do not distinguish among hazardous waste-derived fuels based upon how a particular fuel might compare to a fuel that is not derived from hazardous waste. The Office of Solid Waste has spent considerable time looking at this issue. EPA recently proposed an exclusion for "comparable fuels" that resemble fuels made from virgin materials. The Agency also proposed an exclusion for synthesis gas meeting stringent specifications from the definition of solid waste (and therefore, from regulation as hazardous waste). The Agency believes that syngas meeting the stringent requirements of the proposed exclusion are more appropriately classified and managed as products than as wastes. Based on the information you have provided on MMT's proposed CEP unit, the syngas produced by this unit should qualify for this exclusion.

We are persuaded that these changes will have a positive impact on the development of new recycling technologies. Such changes are a high priority in the context of our overall reevaluation of hazardous waste regulations to remove disincentives to environmentally sound recycling technologies that produce products comparable to those manufactured using virgin materials.

Thank you for your interest in hazardous waste recycling and innovative technologies. If you have any further questions regarding the regulation of solid and hazardous wastes, please don't hesitate to contact Stephen Bergman of my staff at (202) 260-5944.

Sincerely,

Michael Shapiro, Director  
Office of Solid Waste