

## ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

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July 9, 2009

Inés R. Triay  
Assistant Secretary for Environmental Management  
U.S. Department of Energy, EM-1  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Assistant Secretary Triay:

On January 12, 2000, the Department of Energy (DOE) placed a moratorium on the free release of volumetrically contaminated metals pending a decision by the Nuclear Regulatory Commission (NRC) on establishment of national standards. The NRC continues to review this issue, and the moratorium remains in effect. On July 13, 2000, DOE further restricted the release of all scrap metals with radiation levels above the detectable background. This moratorium seeks to prevent public exposure to radiation above background resulting from recycling/reuse of contaminated DOE material in consumer products. However, the moratorium allows reuse for specific purposes by DOE-authorized nuclear facilities, the commercial nuclear industry and NRC licensees authorized to possess the material.

Restricted reuse of the reclaimed scrap metals by DOE-authorized nuclear facilities, the commercial nuclear industry, or NRC licensees authorized to possess the material is the only viable near-term option for disposition of the reusable materials beyond a landfill. Section V.4.c of DOE 5400.5, *Radiation Protection of the Public and Environment*, states that:

Scrap metal that does not meet the requirements of Paragraphs V.4.a and V.4.b may be –

- (3) released for restricted recycling with a designated use (e.g., waste containers) if the material meets DOE approved Authorized Limits for the designated use and there is reasonable assurance that the property will not be recycled into general commerce.

DOE possesses vast quantities of valuable and precious metals at the various facilities throughout the DOE complex. For example, DOE owns approximately 15,600 tons of high-purity nickel with a potential value in the hundreds of millions of dollars. However, annual costs to store and secure this national asset are approximately \$1M. These maintenance costs would be reduced or eliminated by reprocessing the nickel into products useable within the framework of the moratorium. While the existing nickel represents a significant valuable resource, the eventual decontamination and

decommissioning (D&D) of excess buildings could generate volumes of recoverable and recyclable materials. The amount of materials identified for recycling and reclamation at all DOE sites will directly affect the amount of contaminated material that must be sent to on- or off-site disposal sites, the reduction of which would also impact costs.

Recycling, reclamation, and reuse are widely recognized and practiced methods for achieving waste reduction and cost efficient waste management. Generally, the practice of recycling, reclamation, and reuse requires a commitment of some level of resources, both managerial and physical. As a key component of an effective recycling program, DOE should identify an individual/department at each local site with specific responsibilities to identify/quantify/maximize the practice of recycling, reclamation, and reuse.

With nuclear renaissance comes an increased demand for precious metals in the nuclear industry. Increased market price, and advances in metals reprocessing capabilities make this an opportune time to proceed with recycling. It has been advocated that recycling and reprocessing scrap metals is the right approach not only from a waste management perspective, but asset reclamation is also the environmentally responsible path forward.

Recycling of the scrap metals could provide positive economic effects and employment opportunities to the DOE communities retrieving this “waste” during D&D activities across the DOE Complex.

The EM Site-Specific Advisory Board recommends that DOE-EM identify new opportunities to recycle and reuse excess metals and other materials to support waste minimization. This will result in cost savings or cost recovery. By practicing responsible stewardship of government resources, recycling, reclamation, and reuse will also help preserve the precious natural resources of this nation.



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cc: Melissa Nielson, EM-13  
Catherine Brennan, EM-13