

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

Hanford
Oak Ridge

Idaho
Paducah

Nevada
Portsmouth

Northern New Mexico
Savannah River

March 4, 2014

David Huizenga
Senior Advisor for Environmental Management
U.S. Department of Energy, EM-1
1000 Independence Avenue, SW
Washington, DC 20585

Dear Senior Advisor Huizenga:

Background

The Environmental Management Site Specific Advisory Board (EM SSAB) wishes to thank the U. S. Department of Energy (DOE) for taking action toward lifting the moratorium on unrestricted use of non-contaminated metals and equipment from radiological areas. This action, which would preserve metals and materials that would otherwise be treated as waste, demonstrates DOE's commitment to achieving its policies of waste minimization and pollution prevention.

The EM SSAB feels that DOE made the right decision in researching and publishing the *Programmatic Environmental Assessment for the Recycle of Scrap Metals Originating from Radiological Areas (DRAFT)*. Responsible stewardship of government resources by recycling, reclamation, and reuse will help preserve the precious natural resources of this nation for future generations and our national security. The EM SSAB looks forward to the final decision of the Programmatic Environmental Assessment as the DOE seeks to align itself with Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.

The EM SSAB has long advocated recycling and reuse of excess metals and materials by the DOE as an environmentally responsible method for the DOE to deal with waste, as well as preserve national assets. The DOE implemented a pilot study at the Portsmouth Gaseous Diffusion Plant (GDP) site to study nickel processing. The EM SSAB looks forward to reviewing the results of the year-long trial of the carbonyl process recently authorized at Portsmouth.

The EM SSAB feels that the DOE should make a final decision on standards for free-release metals and equipment. International standards, long used by other industrialized nations, provide the regulatory framework for determining free-release standards in developed nations. It is probable that materials which have been imported into the

United States have been released from their country of origin on the basis of the International Atomic Energy Agency standards. Therefore, it would seem that the United States would also adopt these standards as the criteria by which to protect human health and the environment. While we are not advocating a reduction in standards, we are advocating that uniform standards be established based on those already adopted by other industrialized nations.

There are vast amounts of contaminated, high quality nickel and other metals that should be reclaimed when DOE facilities undergo decontamination and decommissioning (D&D). The Paducah GDP and Portsmouth GDP cascades, for example, are made up of several components such as compressors and converters, along with miles of associated piping. These components are constructed of monel, copper, nickel-plated steel, aluminum, and other valuable materials. If these components are treated as waste, they will consume volumes of space in disposal cells. In cases where the technology is not currently available for decontamination, high value materials should be stored pending development of innovative technologies.

Another option for disposition of volumetrically contaminated assets could be restricted reuse of the reclaimed assets by DOE-authorized nuclear facilities, the commercial nuclear industry, or Nuclear Regulatory Commission licensees authorized to possess the material. Nickel currently stored at Paducah and Oak Ridge, along with the volumes which will be generated during the D&D of the GDPs could be used in this manner and still be compliant with the moratorium of January 12, 2000, which prohibits free-release of contaminated scrap metals.

Recommendation

In addition to the DOE making a final decision on release of clean metals and materials originating from radiological areas, the EM SSAB recommends that the DOE establish a comprehensive and structured recycling program to address radiologically contaminated metals and equipment for free-release. This action offers the following benefits:

- Support environmental sustainability goals by recovery of many hundreds of tons of valuable materials and components that are of value to the nation's economy.
- Generate significant revenue to both DOE and host communities.
- Reduce footprint of on-site or off-site disposal cells.
- Minimize disposal costs.
- Reduce site legacy costs.

The EM SSAB recommends the DOE weigh costs associated with recycling and reuse against cradle-to-grave costs of virgin materials. Costs associated with manufacturing include mining, smelting, refining, and commoditization, as well as disposal. Environmental impacts, including greenhouse gases generated during manufacture, should be part of the equation.

The EM SSAB recommends that the DOE adopt International Atomic Energy Agency standards in determining which metals and materials meet the criteria for free-release.

The EM SSAB recommends that the DOE conduct a treatability/pilot study for microwave technology currently used at Pantex and Y-12 for large-scale component metal recycling.

The EM SSAB recommends that the DOE conduct a treatability/pilot study for laser technology for remediation of surface contamination.

The EM SSAB recommends that the DOE study the feasibility of a dedicated smelter and mill where low-level contaminated metals can be reconfigured for beneficial use within the confines of the moratorium.

The EM SSAB recommends that in cases where technology is not currently available for decontamination, high value materials should be stored pending development of innovative technologies.



Herb Bohrer, Chair
Idaho National Laboratory
Site EM Citizens Advisory
Board



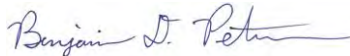
Kathleen Bienenstein, Chair
Nevada SSAB



Carlos Valdez, Chair
Northern New Mexico
Citizens' Advisory Board



David Hemelright, Chair
Oak Ridge SSAB



Ben Peterson, Chair
Paducah Citizens
Advisory Board



William Henderson, Chair
Portsmouth SSAB



Marolyn Parson, Chair
Savannah River Site
Citizens Advisory Board

cc: Candice Trummell, EM-3.2
Dave Borak, EM-3.2