

Hanford Advisory Board Draft Advice

Topic: In-trench Macroencapsulation of Waste at the Environmental Restoration Disposal Facility

Authors: Bloom, Cimon, Hudson, Vanni, Pollet and Leckband

Originating Committee: River & Plateau

Version #1 : **Color:** pink yellow green salmon purple X blue

Background

Worker safety during the performance of work to achieve environmental clean-up at Hanford is a core value of the Hanford Advisory Board (Board) as articulated in the Hanford Advisory Board Values White Paper (11/2/2012). As also noted in that document, the Board encourages and applauds every effort the Department of Energy (DOE) makes to reduce industrial hazards and radiological exposure in the workplace for workers performing clean-up.

The current practice of macroencapsulation at the Environmental Restoration Disposal Facility (ERDF), for a limited set of waste, involves treatment of material at the surface and outside of ERDF before placement into ERDF trenches for disposal. The at-surface protocol for treatment of these wastes requires handling, by crane manipulation, multiple times prior to placement within an ERDF trench. Further, this practice results in an increased risk of industrial accident and the potential for an airborne release. Most importantly, the time that workers must be in relatively close proximity to the waste to accomplish macroencapsulation at-surface results in an otherwise avoidable radiological exposure.

It is the Board's understanding that in-trench macroencapsulation, (treating the waste within an ERDF trench), will reduce worker radiological exposure and potential environmental release by reducing the number of times waste must be handled, while still accomplishing the regulatory treatment requirements. The Board supports a common sense, streamlined approach to reducing both worker risk and the potential for airborne releases while achieving the goals of remediation. However, the Board also believes this approach should be limited to well-defined wastes for a specified period of time and not be a precedent for avoiding regulated facilities for treating equipment.

In general, the Board believes that the best practice to protect worker safety and the environment would be to utilize an engineered facility employing appropriate air controls and containment since DOE forecasts increasing amounts of large-length equipment and other materials requiring macroencapsulation treatment to meet Resource Conservation and Recovery Act Land Disposal Restrictions (LDR) prior to disposal. Waiving the LDR requirements concerning where macroencapsulation is done raises Board concerns about precedent. The Board believes DOE should consider a regulated facility.

Advice:

- The Board supports in-trench treatment at the Environmental Restoration Disposal Facility for a limited set of hazardous waste debris requiring macroencapsulation prior to disposal. (i.e. extra heavy or long-length or irregular shaped waste). The Board believes this change in protocol will achieve a reduction of risk to workers of both radiological exposure and hazards within the workplace.
- The Board also recommends that the Tri-Party Agreement agencies continue to review all treatment options which may be more protective of both worker safety and the environment for long-term needs.

DRAFT

In-trench Macroencapsulation of Waste at the Environmental Restoration Disposal Facility

Version 2 - Thursday

TO:

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- Steve Silverman, U.S. Department of Justice
- Catherine Alexander, DOE-HQ

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In general, the best practice to protect worker safety and the environment would be to utilize an engineered facility employing appropriate air controls and containment since DOE forecasts increasing amounts of large-length equipment and other materials requiring macroencapsulation treatment to meet Resource Conservation and Recovery Act Land Disposal Restrictions prior to disposal

Advice

- The Board advises in-trench treatment at ERDF for a limited set of hazardous waste debris requiring macroencapsulation prior to disposal. (i.e. extra heavy or long-length or irregular shaped waste). The Board believes this change in protocol will achieve a reduction of risk to workers of both radiological exposure and hazards within the workplace.
- The Board also advises that the Tri-Party Agreement agencies continue to review all treatment options which may be more protective of both worker safety and the environment for long-term needs.