

HANFORD ADVISORY BOARD

A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act

Advising:

US Dept of Energy
US Environmental
Protection Agency
Washington State Dept
of Ecology

November 4, 2005

Roy Schepens, Manager

U.S. Department of Energy, Office of River Protection

P.O. Box 450 (H6-60)

Richland, WA 99352

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Washington State Department of Ecology

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Labor/Work Force

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Thomas Carpenter
Susan Leckband
Jeff Luke
Rebecca Holland

Re: Bulk Vitrification

Dear Messrs. Schepens and Manning,

Background

The Hanford Advisory Board (Board) is concerned that decision criteria do not exist for determining whether the Department of Energy-Office of River Protection (DOE-ORP) should continue funding the Bulk Vitrification Demonstration Project. At some point, it may be less expensive to build additional capacity for Low Activity Waste (LAW) vitrification at the Waste Treatment Plant (WTP) than to continue to invest in other alternatives.

The Bulk Vitrification Demonstration Project was funded and permitted as a research and development project. The project was down-selected as the most viable alternative to the WTP to start treating low activity tank wastes earlier than other proposed processes, and to enable DOE-ORP to meet the 2028 milestone for vitrifying all tank waste. The Board has supported the demonstration project so far, but expects the resulting product to be "as good as glass," and expects no money or energy be diverted from continued work on the WTP.

The current cost estimates for the Bulk Vitrification Demonstration Project have now increased to over \$150 million and may be increased significantly in order to resolve safety issues. This is a significant fraction (25%) of the baseline cost for construction of the existing LAW Vitrification Plant. Full scale bulk vitrification production may cost more than a LAW vitrification plant of similar capacity. At the same time, construction and commissioning of the initial LAW vitrification plant, which is not affected by design delays for safety, is on the 2011 pace. Bulk vitrification funding is competing with waste retrieval work for scarce dollars.

HAB Consensus Advice #183

Subject: Bulk Vitrification

Adopted: November 4, 2005

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EnviroIssues Hanford Project Office

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the Umatilla

Washington State

Department of Health

Statements made to the Board by Washington State Department of Ecology (Ecology) officials indicated that Ecology believes insufficient funds in 2006 are available to meet all Tri-Party Agreement milestones.

The Board reaffirms support of the original goal of exploring options to provide a less costly, yet equally safe, alternative to expanded LAW WTP capacity. This support will continue only if the resulting waste product meets or exceeds the performance specifications for waste from the LAW vitrification facility, and does not divert funds or energy from completion of the WTP.

Board Advice:

- The Board advises DOE-ORP to develop decision criteria for determining whether to continue financial support for the Bulk Vitrification Demonstration Project. Decision criteria should be based on the “as good as vitrified glass” standard – meaning the waste products meet or exceed the disposal performance of waste from the LAW vitrification facility. At a minimum, additional criteria should include consideration of cost per unit of waste treated, radioactive exposure to workers, ability to satisfy TPA milestones compared to other LAW treatment, environmental releases and risks from disposal in the Integrated Disposal Facility. Finally, bulk vitrification should not continue to be pursued if it will adversely affect the start date for retrieving and processing wastes in the WTP.
- The Board understands that the Bulk Vitrification Demonstration Project test will not be completed in time to prepare a final report to satisfy TPA Milestone M-62-08 for June 2006. However, DOE-ORP should still produce a June report evaluating available data, including comparative cost analyses for the Bulk Vitrification Demonstration Project facility, a production Bulk Vitrification Plant, and expansion of the current LAW WTP capacity.
- The Board advises Ecology provide its criteria for weighing the following activities: deciding between support for continued funding of the Bulk Vitrification Demonstration Project or funding for retrieval activities; expanded capacity for the LAW vitrification facility; having the LAW vitrification plant operating sooner than 2011; and whether the programmatic risks justify continued investment toward a full scale production facility for bulk vitrification instead of an expanded LAW vitrification capacity.

- The Board also advises the agencies make available their respective criteria for public discussion in Spring 2006, following preliminary design completion for the Bulk Vitrification Demonstration Project and in time for public and regulator input to budget decisions for the Fiscal Year 2007 requests and Fiscal Year 2008 development.

Sincerely,



Todd Martin, Chair
Hanford Advisory Board

This advice represents HAB consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.

cc: Keith Klein, Manager, U.S. Department of Energy Richland Operations Office
Michael Bogert, U.S. Environmental Protection Agency, Region 10
Howard Gnam, Deputy Designated Federal Official, U.S. Department of Energy
Nick Ceto, Environmental Protection Agency
Michael Wilson, Washington State Department of Ecology
Melissa Nielson, U.S. Department of Energy Headquarters
The Oregon and Washington Congressional Delegations

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