



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 1, 2005

Mr. Rick Albright, Director
Office of Air, Waste and Toxics
United States Environmental Protection Agency
Region 10
1200 6th Avenue
Seattle, Washington 98101

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EDMC

Dear Mr. Albright:

Re: Recommendation for Required Demonstration of Equivalent Treatment of Hanford
Bulk Vitrification

References

1. Title 40, Code of Federal Regulations, Part 268.40, *Treatment Standards Expressed as Specified Technologies*
2. *Land Disposal Restrictions For Third Third Scheduled Wastes*, 55 Federal Register (FR) 22661, June 1, 1990

This letter transmits Washington State Department of Ecology (Ecology) recommendation that a Determination of Equivalent Treatment (DET) (pursuant to 40 CFR 268.42 (b)) may be needed to implement a production scale Bulk Vitrification for Hanford tank waste.

The United States Department of Energy-Office of River Protection (USDOE-ORP) and its contractors have been undertaking the testing and development of supplemental treatment of Hanford tank wastes through Bulk Vitrification. Within this development, the question has arisen whether Bulk Vitrification satisfies the HLVT technology treatment standard under the Land Disposal Restriction (LDR) program, 40 CFR Part 268.40, (Reference 1).

In order to assure proper management of Dangerous Wastes and full compliance with applicable Land Disposal Requirements within the state, Ecology has undertaken an evaluation of the Bulk Vitrification as HLVT. Within our evaluation, we reviewed the development and promulgation of the Third Third Land Disposal Restrictions (Reference 2) as well as current information regarding the Bulk Vitrification feeds, process, and products. Our evaluation resulted in a determination that Bulk Vitrification may be a distinct technology from HLVT as defined (Reference 1). Ecology requests that the United States Environmental Protection Agency (EPA) develop a position on the treatment technology differences and assess if the differences are substantial enough to require a DET.

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If the differences are substantial, the production scale treatment of Hanford tank wastes via bulk vitrification would require an EPA approval of a determination of equivalent treatment in order to satisfy the required treatment standard of HLVT, pursuant to the requirements of 40 CFR 268.42(b).

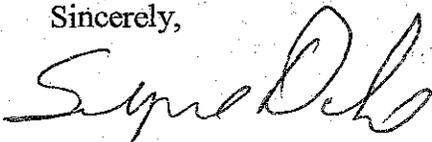
In Ecology's analysis, we found that the following elements of the respective technologies represented the greatest potential differences:

- Melter configuration/operation and primary closed loop recycle systems
- Fate and transport of contaminants of concern including their deposition and or immobilization within the respective disposal packages

With this conclusion by Ecology that Bulk Vitrification and HLVT may be distinct technologies, Ecology asks that EPA concur with this position. Ecology also requests that we work together to define the testing and development requirements whereby the USDOE-ORP's Bulk Vitrification process may DET under 40 CFR 268.42(b). Ecology appreciates EPA's continued collaborative involvement in supporting demonstration of Bulk Vitrification for Hanford Tank Waste. To ensure that this DET effort is consistent and timely with respect to Hanford Federal Facility Consent Order and Agreement Milestones M-62-08 and M-62-11 requirements and coordinated with Demonstration Bulk Vitrification System Project, we would like to establish with EPA, as soon as practicable, an implementation plan including expectations, schedules, and roles and responsibilities. It should be noted that Ecology and USDOE-ORP consider that the current Research Development and Demonstration (RD&D) effort on the pilot Bulk Vitrification system may proceed in absence of the DET. It is this RD&D effort that will obtain the data needed to make a DET assessment.

I look forward to the opportunity to meet with you over the next month in order to develop, coordinate, and incorporate requirements of the DET. Please contact me at (509) 372-7892 to arrange these meetings and provide appropriate staff support.

Sincerely,



Suzanne Dahl
Tank Waste Disposal Project Manager
Nuclear Waste Program

SD:jc

cc: see next page

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cc: Dave Bartus, EPA
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Administrative Record: Supplemental Treatment Down Select