

# 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

June 3, 2011

**CHAIR:**

Susan Leckband

**VICE CHAIR:**

Bob Suyama

Inés Triay

Assistant Secretary for Environmental Management

EM-1/Forestral Building

U.S. Department of Energy

1000 Independence Avenue

Washington, D.C. 20585

**BOARD MEMBERS:**

**Local Business**

Harold Heacock

**Labor/Work Force**

David Davis  
Thomas Carpenter  
Jeff Luke  
Rebecca Holland

**Local Environment**

Gene Van Liew

**Local Government**

Maynard Plahuta  
Pam Larsen  
Rick Jansons  
Rob Davis  
Jerry Peltier  
Richard Leitz  
Bob Parks

**Tribal Government**

Russell Jim  
John Stanfill

**Public Health**

Margery Swint  
Howard Putter

**University**

Doug Mercer

**Public-at-Large**

Norma Jean Germond  
Keith Smith  
Bob Parazin  
Bob Suyama

**Regional Environ-  
ment/Citizen**

Dan Serres  
Susan Leckband  
Paige Knight  
Gerald Pollet

**State of Oregon**

Lyle Smith  
Ken Niles

**Ex-Officio**

Confederated Tribes  
of the Umatilla  
Washington State  
Department of Health

**EnviroIssues**

**Hanford Project Office**

713 Jadwin, Suite 3  
Richland, WA 99352  
Phone: (509) 942-1906  
Fax: (509) 942-1926

Arnold Edelman

Greater-Than-Class C Low-Level Radioactive Waste EIS

Office of Technical and Regulatory Support (EM-43)

U.S. Department of Energy

1000 Independence Avenue, SW

Washington, DC 20585-0119

Re: Draft Greater Than Class C Waste Environmental Impact Statement

Dear Ms.Triay and Mr. Edelmann,

## Background

The draft Greater-than-Class C (GTCC) Environmental Impact Statement (EIS) responds to a need from the Office of the Secretary of Energy, as required by the Low Level Radioactive Waste Policy Amendments Act of 1985, to find a solution for disposal of GTCC wastes from the commercial sector and GTCC-like Low-Level Wastes from the U.S. Department of Energy (DOE) system, and for the civilian industry. By law, GTCC wastes must be disposed in a deep geological repository, or in such other DOE facility as approved by the Nuclear Regulatory Commission. The only operating deep geological repository in the U.S. is the Waste Isolation Pilot Plant (WIPP), which is constrained to accept only defense-originated Transuranic wastes (TRU). Were the GTCC and GTCC-like waste to be disposed of at Hanford, it would be in addition to the 62,000 m<sup>3</sup> and 20,000 m<sup>3</sup> limits for off-site waste established in the Hanford Solid Waste EIS Record of Decision (ROD)<sup>1</sup>.

The alternatives considered in the draft GTCC EIS are: no action, deep geological waste disposal in WIPP, or disposal elsewhere in above-grade vaults, in shallow landfill trenches, or in somewhat deeper large diameter boreholes (30-40 meters deep). Near-surface disposal of long-lived radioactive wastes is considerably less protective of human health and the environment than deep geological disposal and poses higher risks. Hanford remains one of

the leading disposal location alternatives in the draft GTCC EIS as one of six federal sites being considered for the disposal of GTCC and GTCC-like waste.

The Hanford Advisory Board (Board) has consistently advised against the disposal of additional off-site wastes, including GTCC waste, at Hanford<sup>1</sup>. The Board has provided previous advice<sup>1</sup> that concluded that modeling in the draft Tank Closure and Waste Management (TC&WM) EIS clearly showed that Hanford is not suitable for disposal of additional waste. Hanford is not suitable because it is at or over acceptable limits for several radionuclides, including technetium-99, iodine-129, and a number of uranium isotopes<sup>2</sup>. The Board believes the estimated peak annual risk to human health and the environment from trench and vault GTCC disposal, in combination with the risk already coming from Hanford, is unacceptably high (48 and 49 mrem/year, respectively).<sup>2</sup> The borehole disposal risk estimates seem to be too low for a similar type of disposal (4.8 mrem/year).<sup>2</sup> For uranium, the Board believes that the peak estimated groundwater dose for vaults and trenches (approximately 600 mrem/year)<sup>2</sup> and for boreholes (approximately 200 mrem/year)<sup>2</sup> is unacceptably high.

As the draft TC&WM EIS illuminates, under current proposals for disposing of existing Hanford wastes, groundwater standards at Hanford will be exceeded for thousands of years<sup>2</sup>. Acceptance of additional wastes from offsite would greatly increase and compound those already identified impacts.

The Board submits this advice as its comments on the draft GTCC EIS, in addition to being formal advice to DOE.

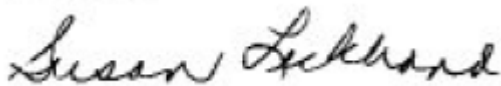
**Advice:**

- The Board advises DOE remove Hanford from the list of alternative locations for GTCC disposal.
- The Board reiterates prior Board advice that no additional off-site waste, including GTCC or GTCC-like waste, should be disposed at Hanford<sup>2</sup>.
- The Board advises DOE to recognize that the additional risk from disposing GTCC and GTCC-like waste, in combination with waste already at Hanford, exceeds risk levels acceptable for human health and the environment.
- The Board advises that a subsequent 2022 decision to import any off-site wastes to Hanford should require a new National Environmental Policy Act (NEPA) analysis and EIS, with a full NEPA public involvement process.
- The Board advises that DOE include all Remote-Handled TRU, GTCC and GTCC-like wastes in the analysis for an alternative deep geological disposal site

(in the case where WIPP is found to be unavailable) documented in the GTCC EIS. The Board advises that any disposal alternative other than deep geological disposal for GTCC wastes will not be protective.

- The Board advises that the draft GTCC EIS should include the improved modeling analyses from the draft TC&WM EIS that describe both the impacts from existing Hanford wastes and imported wastes under DOE's proposed alternatives. The Board recommends that the GTCC EIS should include cumulative impacts from both of the pending draft TC&WM and GTCC EIS proposals to import and bury additional wastes at Hanford. The Board advises that DOE should be including the draft TC&WM EIS modeling for migration and doses, because it appears to be significantly more sophisticated than the modeling used in the GTCC EIS. The public should have the opportunity to review and comment on a revised draft EIS showing these cumulative impacts if DOE continues to consider Hanford for disposal.
- The Board advises DOE to analyze transportation impacts along the actual routes which waste would be transported, and that this information should be added into the draft EIS. DOE should consider the cumulative transportation-related impacts from waste from the pending TC&WM EIS and GTCC EIS proposals. The public should have the opportunity to review and comment on these impacts.
- The Board advises that DOE, as a part of the decision to dispose of the GTCC wastes, should include examination of appropriate treatment methods for immobilizing long-lived radionuclides, such as technetium-99 and iodine-129, prior to waste disposition in any proposed disposal facility.

Sincerely,



Susan Leckband, Chair  
Hanford Advisory Board

---

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

cc: Matt McCormick, Manger, U. S. Department of Energy, Richland Operations  
Scott Samuelson, Manager, U. S. Department of Energy, Office of River Protection  
Stacy Charboneau, Co-Deputy Designated Official, U.S. Department of Energy,  
Office of River Protection

Nick Ceto, Co-Deputy Designated Official, U.S. Department of Energy, Richland  
Operations Office  
Dennis Faulk, U. S. Environmental Protection Agency  
Jane Hedges, Washington State Department of Ecology  
Catherine Brennan, U.S. Department of Energy, Headquarters  
The Oregon and Washington Delegations

---

<sup>1</sup>Draft Environmental Impact Statement for the Disposal of Greater-than-Class C Low-Level Waste and GTCC-Like Waste (DOE/EIS-0375-D; Volume 1, Section 6.5, Settlement Agreements and Consent Orders for the Hanford Site, p. 6-111, lines 37-39, speaking about the Final Hanford Site Solid Waste Program Environmental Impact Statement, Richland WA (HSW EIS), January 2004.

<sup>2</sup>HAB Advice #229 – Tank Closure and Waste Management EIS, #157 – Final Hanford Solid Waste EIS, #153 – Need for Site-Wide Cumulative Impact Analyses Relative to Hanford Solid Waste EIS and Decisions to Add Waste from Offsite, #142 – Offsite TRU Waste, #136 - Draft Hanford Solid Waste EIS, #133 – Draft Hanford Solid Waste EIS, #94 – Hanford Cleanup Priorities, and #84 – FY2000 Budget Advice.