



U.S. Department Of Energy Office of River Protection

Agency Update to the Hanford Advisory Board

Kevin Smith
Manager

Short Bio Kevin Smith

- **Manager of Los Alamos Site Office**
- **Acting Manager of Kansas City Plant**
- **Deputy Manager of Y-12 Site Office**
- **Assistant Manager of Nuclear Material Stabilization Project**
- **Director of Safety for Air Combat Command for U.S. Air Force**
- **Deputy J3 for U.S. Forces Korea**
- **Commander of 49th Operations Group**

Side Note: Native of Olympia, Washington

Short Bio Bill Hamel

Waste Treatment Plant Assistant Manager

- Assistant Manager of Infrastructure Support for Idaho Operations Office
- Federal Engineering Division Director for Waste Treatment Plant
- Team Lead for High-Level Waste Projects at West Valley Demonstration Project
- Extensive experience in nuclear facility design, construction and operations

Side Note:

Low Activity Waste Facility – 61% Complete



4

Analytical Laboratory – 65% Complete



Balance of Facilities – 53% Complete



High Level Waste Facility*



*Percent complete pending resolution of technical issues

7

Pretreatment Facility*



*Percent complete pending resolution of technical issues

EM Environmental Management

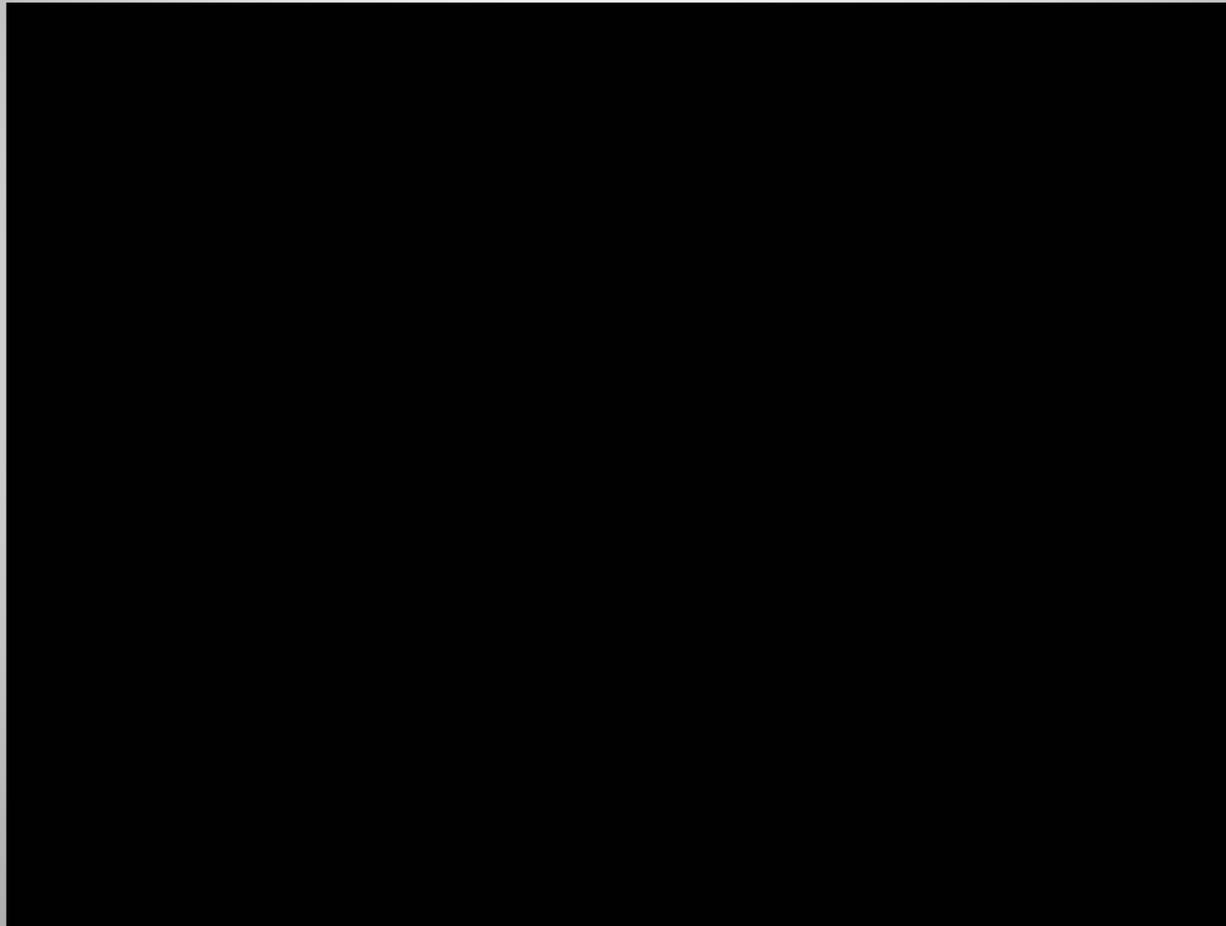
safety ❖ performance ❖ cleanup ❖ closure

Office of River Protection

Tank Farms Progress

Demonstrated New FoldTrack Technology for Single-Shell Tank Retrievals

Scheduled for Deployment in Tank C-110 in Fiscal Year 2013



Tank Farms Progress

Retrieval Activity Continues in C-101

Currently 40% Complete

Specific Topics for the Hanford Advisory Board

Peter S. Winick, Chairman
 Joetta H. Robinson, Vice Chairman
 John E. Mansfield
 Joseph F. Buder
 Sam Sullivan

**DEFENSE NUCLEAR FACILITIES
 SAFETY BOARD**
 Washington, DC 20585-2011

September 28,

The Honorable Steven Chu
 Secretary of Energy
 U.S. Department of Energy
 1000 Independence Avenue, SW
 Washington, DC 20585-1000

Dear Secretary Chu:

On September 28, 2012, the Defense Nuclear Facilities Safety Board (DNFSB), unanimously approved the Hanford Tank Farms Flammable Gas Safety Strategy, which is enclosed. This Recommendation identifies the need to take actions to reduce gas events at the Hanford Tank Farms.

After you have received this Recommendation and as required by the Board will promptly make it available to the public. The Board's Recommendation contains no information that is classified or otherwise restricted by the Atomic Energy Act of 1954, 42 U.S.C. § 2161-2, and DOE will arrange to have it placed promptly on file in your regional public file and also publish this Recommendation in the *Federal Register*.

The Board will evaluate DOE's response to this Recommendation and its Board's Policy Statement 1, *Criteria for Judging the Adequacy of Implementation Plans for Board Recommendations*.

Sincerely,

 Peter S. Winick
 Chairman

Enclosure

c: Mr. Scott L. Sarnaachon
 Mrs. Mari-Jo Campagnone

The Secretary of Energy
 Washington, DC 20585

January 7, 2013

The Honorable Peter S. Winick
 Chairman
 Defense Nuclear Facilities Safety Board
 625 Indiana Avenue, NW, Suite 700
 Washington, DC 20584

Dear Mr. Chairman:

The Department of Energy (DOE) acknowledges receipt of the Safety Board's Recommendation 2012-2, *Hanford Safety Strategy*, issued on September 28, 2012, published on October 12, 2012, and accepts the Recommendation.

The Board acknowledged in its Recommendation that it made to the specific administrative controls and the limited work was needed to make the ventilation control. DOE agrees. In developing an implementation plan, DOE will significantly improve the robustness of flammable gas control for Double Shell Tank (DST) ventilation systems. Recommendation 2012-2.

DOE's approach to addressing sub recommendations is as follows:

- Phase 1 will be to complete implementing the DOE's Analysis by January 2013. This will include applying monitoring control with a new control that will install tank on a periodic basis. This Documented Safety Analysis (DSA) for DST primary tank ventilation system will ensure the importance of maintaining active ventilation on these tanks.
- Phase 2 will be to install initial early-detection leak monitoring of the ventilation exhaust flow from each confined-space, radiological pit only for data collect this point, a robust safety-significant engineered control flow measurement through each tank to real-time.
- Phase 3 will be to ensure the best flow tank data used data analysis at event occurrence.

John A. Kitzhaber, MD
 GOVERNOR

January 17, 2013

The Honorable Steven Chu
 Secretary of Energy
 1000 Independence Avenue, SW
 Washington D.C. 20585

Dear Secretary Chu:

The Oregon Hanford Cleanup Board, which advises me on the Hanford cleanup, is concerned about the recent discovery that the inner liner of a Hanford tank is leaking. The board does not make this recommendation for high-level waste. The board does not make this recommendation until the budget is already in final milestones. Building new tank capacity represents a significant new expense.

Nevertheless, the clear degradation of at least one double-shell tank is a problem with the construction of the Waste Treatment Plant complex, retrieve and store waste from the old single-shell tanks demand immediate additional tank capacity.

We don't presume to know the technical specifications of waste storage and future needs at Hanford – whether it is four new tanks, or six, or a mix of sizes and above- and below-ground tanks is needed. We leave that to DOE to determine. However, it is clear that Hanford needs additional capacity. The board also believes that new tank capacity should be integrated into the Treatment Plant for blending, mixing and waste staging.

Advocating for new tank capacity should in no way be construed as devaluing the Waste Treatment Plant. Oregon's board believes it is even more important to be resolved and funding continued to complete construction, commissioning the Waste Treatment Plant, preferably without losing further ground in the process.

Funding for new tank capacity should be in addition to the current level of funding. It should not have to defer planned cleanup work to resolve this problem.

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The Secretary of Energy
 Washington, D.C. 20585

January 14, 2013

The Honorable Christine Gregoire
 Governor of Washington
 Olympia, Washington 98504

Dear Governor Gregoire:

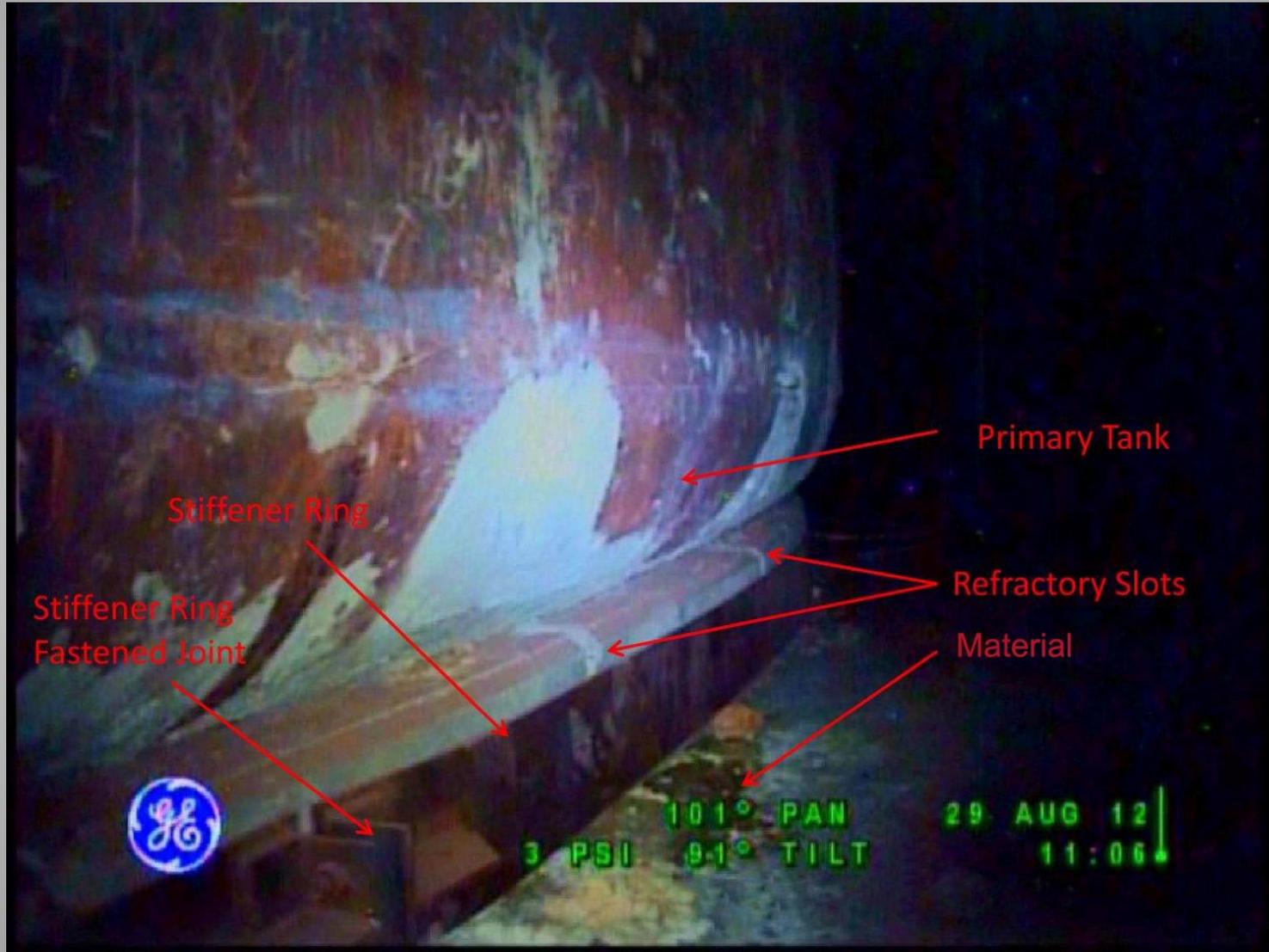
Thank you for your continued engagement regarding the cleanup of the Hanford site. As you know, several months ago, I assembled some of the nation's brightest individuals to review the Waste Treatment and Immobilization Plant (WTP) project technical issues and Hanford tank waste treatment strategies. This was a comprehensive review that was informed by and built upon previous expert reviews, taking into account new information and thus providing additional focus to ensure the WTP will operate reliably for its design life. Furthermore, the review has identified opportunities to increase the flexibility and reliability of the Hanford tank waste treatment system. For example, the Department is engaged in a serious and expeditious evaluation of the option to provide direct waste feed to the Low-Activity Waste (LAW) and High-Level Waste (HLW) facilities independent of the Pretreatment (PT) facility. This approach may provide an opportunity to begin operations of LAW and HLW prior to the completion of the PT facility, and would provide key system redundancies to the WTP plant and tank farms. I have also established an organization at the Office of River Protection to implement the solutions identified through this expert review process.

Your proactive engagement with the Department of Energy (DOE) has helped to define an effective approach for resolving the technical issues with the WTP project. Your staff has also been tremendously cooperative and helpful in providing the State of Washington's important perspective on these issues. These interactions have been very beneficial for DOE and I trust they have been transparent and informative for the State of Washington. This model of interaction between the State of Washington and DOE builds trust and enhances communication while preserving our respective roles as the owner of the cleanup and the regulator. We look forward to continuing this constructive working relationship.

To provide you an update on the project, the construction of the LAW facility, the Analytical Laboratory, and the Balance of Plant Facilities remains on track to be completed in accordance with DOE's construction commitments.



View of Double-Shell Tank AY-102 Leak



No Anomalies Found Inside Annulus of Double-Shell Tank AY-101



No Anomalies Found Inside Annulus of Double-Shell Tank AZ-101



Additional Topics of Interest



Tank Farm Contractor Reaches Unprecedented Safety Milestone

