

March 15, 2013

Honorable Senator Ron Wyden  
221 Dirksen Senate Office Bldg.  
Washington, D.C., 20510

**RE: Support for Hanford Cleanup and Transparency**

Dear Honorable Senator Wyden,

We appreciate your steadfast commitment to ensuring safe and effective cleanup of radioactive and toxic contamination at Hanford. Most recently, your fact gathering visit to the Hanford site and statements on government accountability at Hanford demonstrate this tremendous leadership. As organizations representing tens of thousands of members in Washington and Oregon who rely on the Columbia River for sustenance, recreation, and drinking water, we believe that ensuring the safe, timely cleanup of Hanford is a top priority for the region—and the nation.

The U.S. Department of Energy's (Energy) recent announcement that six single-shell tanks are leaking hundreds of gallons of radioactive waste into the ground at Hanford is a stark reminder of the imminent danger Hanford poses to the public and the Columbia River. This news came less than four months after Energy learned that, for the first time, a double-shell tank leaked radioactive and chemical waste into the annulus space, the 30-inch space between the inner and outer tank. On top of the existing contamination at Hanford, the public cannot afford delay in responding to tanks leaking radioactive waste. Action is now needed on Capitol Hill.

We urge you to schedule promptly hearings to address the unacceptable risks posed by leaking single-shell and double-shell tanks and interim measures to protect the public, Hanford workers, and the Columbia River from the serious threats posed by leaking tanks. In November, the Hanford Advisory Board addressed the critical importance of moving forward with a backup plan in light of significant setbacks with the waste treatment plant. Specifically, HAB called on Energy to build more tanks as an interim measure to protect the environment while, at the same time, moving forward with long term treatment solutions. Under your leadership as chairman of the Senate Energy and Natural Resources Committee, Energy must be held accountable for responding to the serious threats to public welfare posed by recent developments at Hanford's tank farms.

We are also asking for your leadership to ensure that Energy is conveying accurate information on the status of Hanford cleanup. Energy's "2015 Vision" public relations campaign is a prime example of Energy whitewashing the true extent of contamination at Hanford. Five years ago, Energy released their "2015 Vision" for Hanford, which promises to reduce Hanford's active cleanup footprint in the River Corridor by 90 percent by 2015.<sup>1</sup> In late 2012, the Tri-Party Agreement Agencies (Energy, the U.S. Environmental Protection Agency, and the Washington Department of Ecology) announced setbacks in Hanford

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<sup>1</sup> Department of Energy's 2015 Vision, <http://hanford.gov/page.cfm/2015VISION>.

cleanup deadlines. Even if Energy did not push back cleanup deadlines, the 2015 Vision would be inaccurate: it underestimates the amount of cleanup that remains by ignoring, among other things, groundwater contamination. Under your leadership, Energy should be held to higher standard of truth in advertising.

We look forward to working with you and your staff on the monumental task of protecting the public and future generations from Hanford's nuclear legacy.

Sincerely,

Brett VandenHeuvel  
Executive Director  
Columbia Riverkeeper

Kyle Smith  
Calapooia River Steward

Bob Ferris  
Executive Director  
Cascadia Wildlands

Bill Bakke  
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Spokane Riverkeeper

H. Tom Davis  
Upper Deschutes River Steward

Stan Petrowski  
S. Umpqua River Steward

*Enc.*

Hanford Advisory Board Consensus Advice #263: Double-Shell Tank Integrity (Nov. 2, 2012)

# 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 2, 2012

**CHAIR:**

Susan Leckband

**VICE CHAIR:**

Steve Hudson

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Assistant Secretary for Environmental Management  
EM-1/Forestal Building  
U.S. Department of Energy  
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Washington, D.C. 20585

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U.S. Environmental Protection Agency, Region 10  
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Jane Hedges, Program Manager  
Washington State Department of Ecology  
3100 Port of Benton Blvd.  
Richland, WA 99354

Re: Double-Shell Tank Integrity

Dear Messrs. Huizenga, Samuelson, McCormick, Faulk and Ms. Hedges,

## **Background**

The purpose of this advice is to present Hanford Advisory Board (Board) views to the U.S. Department of Energy (DOE) and the Washington Department of Ecology (Ecology) for their consideration in response to a leak in the inner liner of Double-Shell Tank (DST) AY-102, and in planning for the future.

On October 22, 2012, as a result of DOE's ongoing monitoring and inspections, DOE announced there is a slow leak from the inner liner to the annulus at tank AY-102. DOE further acknowledged this is the first time a DST leak from the primary tank into the annulus has been identified.

A number of the DSTs are nearing the end of their design lives, and yet, there is no plan for the complete retrieval of them for decades. The remaining safety margins for these tanks against corrosion, stress, strain, and earthquake is uncertain; however, via the processes of commonly understood chemistry and physics, the margins are decreasing. It appears that additional tank capacity is a necessary interim measure to protect the environment. However, building more tanks at Hanford does not delay the urgent need for tank waste treatment.

The Board acknowledges that constructing additional DST capacity constitutes a significant shift in its prior position. The AY-102 event identifies the need to develop additional contingency measures. Sufficient budgets must be requested and immediate action needs to be taken beyond that which DOE has taken to date.

The Hanford Site lacks sufficient available tank space to empty a leaking DST, while continuing the mission of emptying Single-Shell Tanks (SSTs), without first needing to distribute excess wastes among the remaining tanks. There is a compelling need for additional measures to secure tank space that would be immediately available to empty a leaking DST and prevent further spread of waste into the environment.

DOE and the Hanford Tank Farm contractor have made plans to transfer waste to the Waste Treatment and Immobilization Plant (WTP) through a select set of DSTs. This plan is jeopardized when one of these tanks fails or becomes unusable. Reliance on a single path creates a potential choke point which could stop waste feed delivery to the WTP. Our common mission is to immobilize all tank waste by approved methods as soon as possible. The critical path of this mission is jeopardized if it is susceptible to single failure choke points.

DOE and the Hanford Tank Farm contractor lack the agility to rapidly transfer the waste from a leaking DST to a sound DST. The available emergency tank space is distributed among many DSTs, which in some cases will require testing for waste compatibility prior to transfer. DOE indicated in its latest briefing that such testing could take weeks, if not months, to draw down the waste in one tank. This lack of agility may allow large amounts of waste to be released to the secondary containment annulus before DOE can sufficiently empty a leaking inner tank. If, as appears to be the case for AY-102, the leak is in the primary tank bottom, this problem may be particularly critical.

The Board believes that, historically, infrastructure has degraded to the point of failure. The Board also believes there have been times when the chemistry has been outside limits set for corrosion control, which puts the tanks at risk for corrosion and corrosion cracking. The extent to which these excursions may have influenced the safe working life of the system is uncertain. The Board recognizes the difficulty and complexity of Tank Farm operations. Our value is that a high priority should be assigned to maintaining waste chemistry compliant within the specification range at all times, to reduce the probability of leaks in the DST system. The Board values DOE's independent, expert reviews of specifications, procedures, and operations. It is important to the Board to have the discovery of a leaking tank reviewed by these experts.

DOE and the Tank Farm contractor briefings on the chemistry and corrosion monitoring programs indicate that these guidelines are based on a sampling of a limited set of the tanks and assume that this sampling will be sufficient to operate and protect all of the tanks. The Board believes the lack of detailed knowledge for each of the tanks results in risk and uncertainty that one or more additional tanks may leak while they are still needed. The Board supports a thorough investigation of the material that is in the annulus of AY-102, the mechanism or path for potential leaks from the tank, and the application of this knowledge to other DSTs looking for potential common causes and problems. Inspections should be expanded to all of the DSTs, and performed on a more frequent schedule.

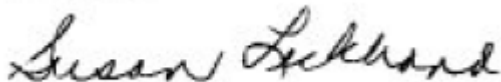
The Board expects successful containment, treatment, and disposition of all tank wastes. There is interdependency between the Tank Farms' ability to continue containing high level waste in a safe configuration and the ability to provide feed to a running WTP; thereby supporting final immobilization of the waste. We cannot reach success for this monumental program unless both sides of this project are successful. The uncertainty about when the WTP will actually be online demands a reassessment of the Tank Farms' ability to continue to store high level waste safely, over an unknown time period, and to provide the appropriate waste feed to the WTP.

### **Advice**

- The Board advises DOE to begin the process immediately to build additional tank capacity at Hanford. This additional tank capacity should consider the needs of the WTP and requirements of the TPA relative to tank waste treatment, allowing for maximum flexibility for blending, transferring, segregating, and otherwise dealing with wastes.
- In addition to DOE's efforts to locate the source of the leak from Tank AY-102, the Board advises DOE to explore potential solutions for determining the cause, stopping the leak, and repairing the tank.

- The Board advises DOE that the new tanks should be planned to support future waste feed delivery to the WTP, or to whatever other waste processing facility may be in place. The Board advises DOE to include multiple paths for feeding the WTP from the DST system in their overall planning. DOE should not rely on AY-102 (or any other individual tank) to feed the WTP.
- The Board advises DOE to ensure that emergency tank space is available at all times, and not constrained by a need for redistribution of tank waste across the population of DSTs. Additionally, the Board advises DOE to ensure that the necessary plans, pumps, piping, procedures, and other equipment needed are in place to quickly pump any tank found to be leaking in accordance with requirements and agreement with the Washington State Department of Ecology.
- The Board advises DOE to expand sampling to all DSTs and maintain the chemistry of the waste in the tanks, such that it always remains within the specification range.
- The Board advises DOE to complete exterior inspections, insofar as the tanks can be inspected, of all DST inner tanks at an increased frequency.

Sincerely,



Susan Leckband, Chair  
Hanford Advisory Board

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*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: Catherine Alexander, U.S. Department of Energy, Headquarters  
The Oregon and Washington Delegations

March 15, 2013

Senator Patty Murray  
448 Russell Senate Office Building  
Washington, DC 20510

**RE: Truth in Advertising with Hanford Cleanup**

Dear Honorable Senator Murray,

We appreciate your long-term dedication to ensuring safe and effective cleanup of radioactive and toxic contamination at Hanford. Our organizations represent tens of thousands of members in Washington and Oregon who rely on the Columbia River for sustenance, recreation, and drinking water. We are asking for your leadership to ensure that the U.S. Department of Energy (Energy) is conveying accurate information to the general public on the status of Hanford cleanup along the Columbia River, an area referred to as the River Corridor. In this vein, **we are calling on you to ask Energy to pull the 2015 Vision Campaign**, a public relations campaign that misleads the public and decision makers about the extent of cleanup in the River Corridor.

Five years ago, Energy released their “2015 Vision” for Hanford.<sup>1</sup> The 2015 Vision promises to reduce Hanford’s active cleanup footprint by 90 percent by 2015. By focusing on the surface operations, Energy misleads the public by failing to address the underground contamination. And now it is clear that Energy will not meet their 2015 cleanup milestones. In December 2012, the Tri-Party Agreement agencies (Energy, Washington Department of Ecology, and the U.S. Environmental Protection Agency) announced plans to extend the River Corridor cleanup schedule beyond 2015.

Even if Energy did not push back cleanup deadlines, the 2015 Vision would be inaccurate: it underestimates the amount of cleanup that remains by ignoring, among other things, groundwater contamination. Measuring progress by the size of the surface footprint ignores groundwater and vadose zone pollution, which accounts for some of the most insidious pollution in the River Corridor.

Energy should level with the public about the timing and cost of River Corridor cleanup. Although Energy has made significant progress towards cleanup at Hanford, pollution continues to enter the Columbia River and new problems are discovered every year. We appreciate your commitment to protecting Northwest communities from Hanford’s nuclear legacy and urge you to work with Energy to ensure that the agency is providing accurate information to the public.

Sincerely,

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Stan Petrowski  
S. Umpqua River Steward

Tracy Bier  
Executive Director  
Washington Physicians for Social Responsibility

March 15, 2013

Senator Maria Cantwell  
311 Hart Senate Office Building  
Washington, DC 20510

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