

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 8, 2012

CHAIR:

Susan Leckband

VICE CHAIR:

Steve Hudson

Matt McCormick, Manager
U.S. Department of Energy, Richland Operations
P.O. Box 550 (A7-50)
Richland, WA 99352

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
Bob Adler
Bob Parks

Tribal Government

Russell Jim
John Stanfill

Public Health

Tony Brooks
Howard Putter

University

Doug Mercer
Richard Stout

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

Dennis Faulk, Manager
U.S. Environmental Protection Agency, Region 10
309 Bradley Blvd, Suite 115
Richland WA 99352

Re: 300 Area RI/FS and Proposed Plan

Dear Messrs. McCormick and Faulk,

Background

Final decisions about cleanup at Hanford's 300 Area are important because of their potential impacts to the Columbia River. The 300 Area Remedial Investigation and Feasibility Study (RI/FS) and Proposed Plan, along with the 100-K RI/FS, will provide a template for subsequent River Corridor and similar decisions to follow. It is important to the Hanford Advisory Board (HAB or Board) that these first River Corridor decision documents are dependable, protective, defensible, and well supported. After a review of the 300 Area RI/FS and Proposed Plan, the Board finds that these goals are not met.

The Board finds the 300 Area RI/FS and Proposed Plan documents to be difficult to digest because they contain excess and unnecessary information, yet concurrently lack the detail and data that would help the reader understand the approach and the solution proposed. For example, there is a lack of any detail on institutional controls. Given the importance of this process as the platform for development of many future decisions, there is a need for greater conciseness, transparency, and rigor in documenting the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process through the RI/FS to the Proposed Plan.

Envirolssues

Hanford Project Office

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

HAB Consensus Advice # 257
Subject: 300 Area RI/FS & Proposed Plan
Adopted: June 8, 2012
Page 1

The Board believes that the basis for the decision to select a preferred alternative in the 300 Area RI/FS is flawed. Specifically, it is the Board's position that in order to inform and complete the Proposed Plan and record of decision (ROD), it is first necessary to finish the risk assessment documents supporting the 300 Area CERCLA process.

The Board believes there is an over-reliance on sequestration for soil uranium remediation in the 300 Area Proposed Plan. Treatment demonstrations have shown that this technology was not entirely successful¹ in the near river environment. The flux of varying river stage water complicates the emplacement of poly-phosphates, and impedes the process of forming autunite minerals. Infiltrating the poly-phosphate solution from the surface or injecting the solution into the aquifer has had only limited success¹. Tests performed to date in groundwater and the Vadose Zone have not provided sufficient information to guarantee a successful implementation of this technology on a large-scale basis.

Rather than move to a final ROD with poly-phosphate sequestration as the preferred alternative and monitored natural attenuation as the fall back, the Board supports delaying the ROD in order to first conduct a treatability test to further explore the viability of this technology.

A treatability test will help determine the optimum approach to apply phosphate, using some combination of surface infiltration and Periodically Rewetted Zone (PRZ) injection techniques to the uranium contaminated areas. Injection into the PRZ could be designed to also deliver treatment to the upper portion of the groundwater. The treatability test would collect Vadose Zone and groundwater monitoring information that could then be used to assess future remedy performance. The resulting information would be brought forward to design and implement a full-scale system in the proposed plan and eventual ROD.

In previous advice, the Board has consistently advocated for the maximum use of remove, treat, and dispose (RTD) whenever possible, and especially near the river. Because of the concern for re-mobilizing uranium through the application of dust suppression water during RTD operations, the Board believes the Tri-Party Agreement (TPA) agencies should opt for an alternative that uses a phased approach for evaluating the efficacy of uranium sequestration in an Interim Action, before implementing a Proposed Plan and final ROD. If this sequestration evaluation demonstrates that the technology is not successful at

¹ *PNNL-16571 (2007); PNNL-16761 (2007); PNNL-17480 (2008); PNNL-18529 (2008); PNNL-19461 (2010)*

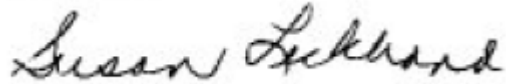
sequestering a majority of the mobilized uranium, the Board supports focused RTD on residual contamination hot spots as the best alternative.

The Board recognizes that the TPA agencies have major negotiated milestones that require final RODs along the River Corridor. However, the Board can only support the proposed remediation technology (Alternative 3) as an Interim Action, with the attendant need to modify the milestone schedule.

Advice

- The Board advises the TPA agencies to modify the milestone schedule for the 300 Area RI/FS decision to proceed with poly-phosphate sequestration as an Interim Remedial Measure/ Expedited Response Action, until such time that this phosphate sequestration or some other technology can be tested and proven to be effective before proceeding to writing the final ROD and Proposed Plan.
- In the event the poly-phosphate sequestration technology testing is shown to be unsuccessful, the Board does not support monitored natural attenuation (MNA) as a solution. The Board advises the TPA agencies to consider the HAB's longstanding commitment to RTD values, especially to remove contaminants from near the river, when the next alternative selection is being made.
- The Board advises the TPA agencies to develop future RI/FS documents that adequately reflect a comprehensive risk assessment (following the CERCLA process) and that address cleanup levels based on Model Toxics Control Act (MTCA) Method B, or Safe Drinking Water Act maximum contaminant levels. The Board advises the TPA agencies that cleanup plans should be developed assuming reasonably foreseeable future scenario exposures for people other than industrial workers and on contaminants of concern to which people, flora, and fauna are or may be exposed because of contact with Hanford groundwater and riparian habitat.
- The Board advises the TPA agencies to finalize RI/FS documents, including all supporting documents, prior to the development of any Proposed Plan.
- The Board advises the TPA agencies to work to present RI/FS and supporting document information, including the data and details which support decisions, in a manner that is easy to read, concise, transparent, and readily accessible within the decision document.

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: Scott Samuelson, Manager, U.S. Department of Energy, Office of River Protection
Dana Bryson, Deputy Designated Official, U.S. Department of Energy, Richland
Operations Office
Jane Hedges, Washington State Department of Ecology
Catherine Brennan, U.S. Department of Energy, Headquarters
The Oregon and Washington Delegations