

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 5, 2010

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Re: Engineering Evaluation/Cost Analysis for 105-KE Reactor Decommissioning
(DOE/RL-2009-106, Rev 0)

Public-at-Large

Norma Jean Germond
Keith Smith
Bob Parazin
Bob Suyama

Dear Messrs. Brockman, McCormick, Faulk and Ms. Hedges,

Regional Environ-

ment/Citizen

Larry Lockrem
Dan Serres
Susan Leckband
Paige Knight
Gerald Pollet

Background

State of Oregon

Lyle Smith
Ken Niles

Since late 2009, the U.S. Department of Energy, Richland Operations Office (DOE-RL) has been exploring the possibility of dismantling the 105-KE Reactor block (105-KE) in the near term, instead of placing the reactor block and shields into Interim Safe Storage as planned for the original production reactors (with the possible exception of B-Reactor). One incentive for early dismantlement is to access contaminants that are present in the soil beneath the reactor facility. These contaminants cannot otherwise be removed without undermining the support structures of the reactor block. Another factor supporting consideration of early dismantlement of 105-KE has been the actual dismantlement and

Ex-Officio

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EnviroIssues

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removal in 2009 and 2010 of the graphite stack from the Brookhaven Graphite Research Reactor in New York State. At Brookhaven, remote-handling systems were developed and used to remove the graphite stack from within the biological shield to reduce worker radiation dose arising from the removal activities.

To support the possible early dismantlement of 105-KE, DOE, on July 27, 2010, issued a Supplement Analysis (DOE/EIS-119F-SA-01) to its 1993 *Record of Decision for Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland, WA*. This Supplement Analysis concludes that immediate dismantlement is not significantly different from deferred dismantlement, and states “Therefore a supplement to DOE/EIS-119F or a new EIS is not needed.” Other administrative steps necessary to permit immediate dismantlement have been, and are, underway to facilitate selection and implementation of this alternative. The most recent action has been the issuance of an engineering evaluation/cost analysis (EE/CA) document (DOE/RL-2009-106), which is currently out for public review until November 17, 2010.

The Hanford Advisory Board (Board) believes this draft EE/CA is deficient in several important ways:

- The engineering evaluation presented is based on results contained in the original EIS, with little discussion on the actions that will have to be performed to dismantle the reactor block. An engineering analysis should contain descriptions and discussions of the actions to be taken, including project schedules, staffing requirements, special equipment needs, estimation of worker radiation dose, and waste disposal volumes. While Brookhaven provides important lessons learned, there are significant differences in scale, reactor construction, coolant type, and operating history at Hanford.
- A set of cost numbers is presented, abstracted from the 1992 Final EIS on decommissioning the eight original production reactors (DOE/EIS-119F) and escalated by a factor of 1.27 from the 1990 dollars identified in the EIS. No new cost estimates have been developed because no new dismantlement analyses have been performed.
- The need for immediate remediation of the soils underlying 105-KE is not demonstrated in this document. While the Board agrees that removing the contaminated soil plume beneath the reactor block could help prevent contaminants from getting into the Columbia River, the EE/CA document does not present a compelling case for reactor removal that explains why soil beneath

105-KE comprises a greater risk to human health and the environment than does the soils beneath the other old production reactors.

- The potential impact of the cost of performing immediate dismantlement of 105-KE on the budgets and schedules for the rest of the site remediation efforts is not discussed in this EE/CA. If this project is accelerated, others will be delayed and TPA deadlines will be impacted.

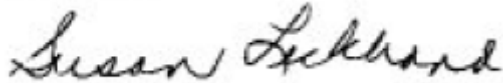
While the Board believes the current draft EE/CA is not adequate for its intended purpose, the concerns expressed by the Board should not be interpreted to mean the Board opposes immediate dismantlement of 105-KE.

Advice

- The Board encourages DOE-RL to proceed with the analyses and planning for dismantlement of 105-KE, with the timing of the action to be determined by site-wide funding priorities. The removal of 105-KE could eliminate a potential source of future contaminants, and inform planning for dismantlement of the other reactors.
- The Board advises DOE-RL to document and present an engineering evaluation of the proposed action and detailed cost estimates that reflect the experience at Brookhaven. These evaluations should include considerations of estimates of the quantities and types of waste that would be generated from the dismantlement process, explain the planned disposition of the wastes generated, and calculate the added impacts to site disposal facilities.
- The Board advises DOE-RL to measure the soil contaminant levels (including all contaminants of potential concern) beneath all of Hanford's old production reactors. These measurements should be analyzed to determine whether or not the risks arising from the contaminant levels beneath the old reactors are sufficiently great to justify starting immediate dismantlement of those reactors, relative to other remediation actions currently budgeted and scheduled.
- Once the additional analysis is complete, the Board would like the opportunity to provide advice to DOE and the regulators, and the agencies to provide the public an opportunity to comment, before a decision is made to proceed with reactor demolition. The Board would also like to work with the agencies to develop

appropriate public involvement for the post-decision documents (e.g. removal action work plan, sampling analysis plan).

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: JD Dowell, 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
Catherine Brennan, U.S. Department of Energy, Headquarters
The Oregon and Washington Delegations