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Washington State Dept of Ecology

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Jane Hedges, Program Manager Washington State Department of Ecology 3100 Port of Benton Blvd. Richland, WA 99354

Re: System Plan (Revision 6)

Dear Messrs. Samuelson and McCormick and Ms. Hedges,

## **Background**

The System Plan is a complex simulation of proposed and alternative actions related to tank waste retrieval processing and disposal activities. Continual evaluation of its intended and original purpose while reviewing the planning basis is necessary to identify decisions which will achieve closure of the tank waste complex.

The System Plan (Revision 6) incorporates planning for tank waste retrievals, optimizing the selection of which tanks to retrieve and in what sequence, tank waste blending, processing, and variations on how the U.S. Department of Energy (DOE)-Office of River Protection will operate the Waste Treatment Plant (WTP). It also includes options or alternatives relating to various choices in equipment, technologies, facilities, recovery, processing, and the ultimate disposal of tank waste.

The Board appreciates the openness and fully supports the on-going work and progress of the participating agencies, and encourages continuing this collaborative work as a high priority. The Board looks forward to future discussions with the DOE and Washington State Department of Ecology (Ecology) and their staffs, who have been very open and

helpful. These meaningful discussions have provided the Board with insight into new policy issues as the studies progress.

## Advice

- System planning is important to establishing the approach to efficient cleanup, and to managing the process, costs, and schedules. DOE should fund this work as a high priority.
- For system planning to be effective, the participating agencies should involve all of the stakeholders on each annual revision as they have been, even as the Tri-Party Agreement makes that participation a formal requirement only every third year. The insights gained from working together yearly are far too important to do otherwise; such a project calls for consistent attention to allow the formal reviews to be comprehensive and timely.
- The System Plan should evaluate contamination arising from the tank farm complex, WTP, and residual waste streams of the WTP and ancillary facilities. These scenarios should appropriately include evaluation of the proposed facilities, costs, and impacts occurring from long-term on-site storage of high-level waste products to more accurately capture the total system parameters.
- There are a number of issues that should be considered in future system plans. DOE and Ecology should plan WTP system operations, in so far as it is possible, to maximize immobilization of long half-life isotopes such as technetium-99, iodine-129, and uranium in a deep geological repository rather than in local disposal. Currently, carbon-14 appears to be routed for release to the air which may increase risks to human health and the environment.
- The Board encourages DOE and Ecology to evaluate new and applicable technologies when necessary to meet requirements. DOE and Ecology should not be distracted by alternative technologies that are not well proven until they achieve a high level of maturity and certainty about their capabilities, costs, and other issues. Inclusion of immature technologies on an equal basis with proven technologies in the System Plan creates significant programmatic and financial uncertainties and risks.
- The participating agencies should continue to work towards developing and integrating the System Plan with the Lifecycle Cost and Schedule Report. DOE and Ecology should consider total system costs and operating lifetime, when comparing potential system alternatives (including lifecycle cost, actual capital expenditures,

- operations, decommissioning, and disposition costs). This report should also explicitly evaluate the metrics for performance and risk.
- DOE should include an indicator for "degree of uncertainty" for each alternative in the scenarios document (similar to the currently used indicators of "difficulty" and "priority"), to provide information on how much confidence the decision-makers should place in the System Plan alternatives and results.
- For subsequent System Plans, DOE and Ecology should consider routing to WTP the long half-life isotopes from various waste streams (recovered from solid and liquid wastes, burial grounds, soil, and groundwater). DOE should include these wastes with the high-level waste stream destined to be vitrified and disposed in the highlevel waste repository.

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