



U.S. Department of Energy  
~~Office of River Protection~~  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

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SEP 14 2010

Ms. Susan L. Leckband, Chair  
Hanford Advisory Board  
EnviroIssues Hanford Project Office  
713 Jadwin, Suite 4  
Richland, Washington 99352

Dear Ms. Leckband:

RESPONSE TO HANFORD ADVISORY BOARD (HAB) ADVICE #233, "TANK WASTE SYSTEM PLAN REVISION 4 AND PLANNING ASSUMPTIONS FOR REVISION 5, DATED JUNE 4, 2010

Thank you for your subject letter (enclosure) and interest in Hanford's ongoing efforts to safely store, retrieve, treat, and immobilize tank waste. The U.S. Department of Energy, Office of River Protection (ORP) appreciates the HAB input and understanding of the complexities involved in this process. The River Protection Project (RPP) System Plan describes how the mission could be achieved given an underlying set of assumptions and communicates the potential mission impacts of key issues and uncertainties. This RPP System Plan integrates single shell tank retrieval, waste feed delivery, supplemental low activity waste (LAW) treatment, potential transuranic (TRU) packaging, and operation of the Waste Treatment Plant (WTP). This integration results in the identification of areas that might benefit from resolution of issues and uncertainties and provides input to ORP's ongoing risk mitigation strategies.

The RPP System Plan is currently being revised and is planned to be published in October 2010. The U.S. Department of Energy (DOE) has carefully considered each of the HAB's specific recommendations contained in Advice #233.

**Advice:** Future annual revisions of the System Plan should include the Baseline Case and appropriate alternative cases such as those mentioned in DOE's response to Advice #209.

**Response:** HAB Advice #209 was, "The Updated Tank Waste System Plan should include not only the baseline case reflecting current DOE target budget guidance, but also the case or case reflecting technically achievable and legislatively reasonable incremental funding. It should also include a full funding case, unconstrained by DOE's target budget."

DOE's response to Advice #209 was specific to System Plan Revision 4 that was in preparation at the time of the response. DOE committed to addressing three cases. These cases are presented in System Plan Revision 4 as "Initial Planning Case, Unconstrained Case, and Baseline Case," respectively.

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Two cases will be evaluated in Revision 5. As previously discussed with the HAB, the Baseline Case in Revision 5 will be similar to the Baseline Case evaluated in Revision 4, but modified slightly to reflect current planning bases, to align with the WTP flow sheet, to align with the most recent revisions of the Integrated Waste Feed Delivery Plan and the Single Shell Tank Retrieval Plan, the new high-level waste glass model, the DOE 2004 LAW glass model, and an Aluminum Removal Facility. Potential CH-TRU waste from 11 tanks will be processed through a Supplemental TRU Treatment Facility. The waste packages will be stored at the Central Waste Storage Facility pending final disposition.

Sensitivity Case A will mirror the scope of the Baseline Case except that the Supplemental TRU Treatment Facility will be eliminated and all potential TRU tank waste will be processed through the WTP.

DOE, the State of Washington Department of Ecology, and the U.S. Environmental Protection Agency have recognized the importance of the System Plan to RPP planning. Pending approval, selection of future scenarios, beginning with System Plan 6, will be made in accordance with the proposed Tri-Party Agreement and Consent Order Change Package Milestone M-62-40.

**Advice:** Future revisions of the System Plan should continue to ensure, as does Revision 4 of the System Plan, which key risks (particularly those to health, safety, and the environment) have solid and realistic risk mitigation options identified and included. The revisions should place a priority on dealing with mobile contaminants that drive long-term health, safety, and environmental risks (e.g., uranium, iodine, and technetium). Options for technetium removal and incorporation into an immobilized high-level waste form should be given priority and adequate analysis to support future decision-making.

**Response:** The System Plan addresses the key risks (particularly those to health, safety and the environment) by focusing on the key issues and uncertainties, their potential mitigating actions, and by focusing on the assumed success criteria for completion of single-shell tank (SST) retrievals and treatment of the tank waste. The scenarios underlying future system plans will continue to do so although the level of detail presented in the document may vary depending on the purpose and emphasis of each specific revision.

The System Plan recognizes the importance of the mobile contaminants, for example, one of the key issues and uncertainty in Revision 4 states, "Of particular importance is the ability to safely dispose of the ETF solid product in the IDF." The lifecycle baseline includes workscope to determine how best to treat the secondary liquid waste currently assumed to be handled by upgrades to the Effluent Treatment Facility. An interdependent issue is how to provide the necessary supplemental treatment capacity as the selected technologies, timing, and integration with the rest of the lifecycle flow sheet may influence the amount of mobile contaminants reporting to the secondary liquid waste.

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**Advice:** DOE should ensure that the System Plan revisions and the Lifecycle Report revisions are consistent with each other using the same verified assumptions, uncertainties, and analysis for the common cases.


**Response:** The System Plan is based upon a formally approved set of detailed assumptions that underpin mission planning specific to the RPP. The Lifecycle Plan identifies the lifecycle scope, schedule, and cost for completion of the entire Hanford Site Cleanup Mission. DOE intends that the planning assumptions will be consistent, to the extent possible, to satisfy the requirements of each specific deliverable.

**Advice:** The Board supports the planning assumptions in Revision 5 that the Effluent Treatment Facility, Liquid Effluent Retention Facility, and other facilities will be upgraded as needed to support the waste treatment mission and are assumed to be available when needed. Best estimates of the design scope, schedule, and costs of required facility upgrades and new facilities should be included in future revisions of the System Plan and/or Lifecycle Report.

**Response:** Detailed project design, scope, schedule and cost are more appropriately addressed in project-specific documents. System Plan Revision 5 will reflect the integration of these and other projects and upgrades as needed to support the RPP mission.

We look forward to sharing the RPP System Plan Revision 5 with the HAB after the plan has been approved. If you have any questions, please contact me, or your staff may contact Pamela K. McCann at (509) 376-7663.

Sincerely,

  
David A. Brockman, Manager  
Office of River Protection

ORP:PKM

Enclosure (HAB Advice #233)

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