

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 5, 2008

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending December 5, 2008

Treatment of Tank Farm Low Activity Waste: DOE briefed Washington State officials on the Congressionally-mandated review of the strategy for treating low-level waste at Hanford. The conclusions from the review include: a high priority should be placed on completing the Waste Treatment Plant (WTP) by 2019; some type of supplemental waste treatment is needed in addition to the current Waste Treatment Plant (WTP) design; the planning baseline for this supplemental treatment should be changed from using bulk vitrification to a second Low Activity Waste (LAW) Facility; the decision on which technology should be used for supplemental treatment could be delayed to 2017; and more attention is needed on the infrastructure upgrades and waste retrieval systems required to transfer waste to WTP.

The WTP contractor issued the Conceptual Design Report for the early startup of the LAW Facility. The report notes the LAW control room will not need to be hardened but will require accident monitoring capability.

Plutonium Finishing Plant (PFP): The Richland Operations Office (RL) approved the Justification for Continued Operation (JCO) for operation with HEPA filters that are older than 10 years (see Activity Report 11/21/08). The site rep suggested that the combustible loading checks performed as a compensatory action should be required to be made at the end of the work shift rather than anytime that day. The contractor noted that this was their intention and would investigate a means to ensure that it is implemented in this manner.

The contractor identified that human error resulted in two 3013 containers not having an adequate leak check when they were seal welded approximately five years ago. The leak test equipment is still on site but has not been used since the packaging campaign ended. The contractor is evaluating if portable equipment can be used to test the containers, as one container has been shipped offsite to a location that does not have the leak test capability.

Emergency Preparedness (EP): The contractor determined that three expectations for the recent site-wide EP exercise were not met. Directions from the senior person at the scene were not implemented because they were unclear. The evacuation of an injured worker in the Canister Storage Building was not timely. Radiological response personnel arrived at the accident scene without appropriate equipment and were slow in establishing the radiological boundary. The final report should be issued in January.

K Basin Closure: RL is evaluating if fuel found during burial ground retrieval activities should be sent to the K West Basin for eventual loading with Knock-Out Pot sludge in Multi-Canister Overpacks. This could eliminate the need to store the fuel in casks at the Interim Storage Area.

The contractor concluded that the Potential Inadequacy in the Safety Analysis associated with the vessel-spanning hydrogen bubble in the sludge containers (see Activity Report 10/3/08) is an Unreviewed Safety Question.