

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 22, 2009

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending May 22, 2009

Waste Treatment Plant (WTP): The EM Technical Authority Board (TAB) Chairman directed a team to review proposed changes to the design of the Pretreatment Facility (PTF) resulting from reduced material at risk (MAR). At the onset of the two-day review, the team leader recognized that only limited material could be covered but committed to perform an independent assessment. At the exit brief, the team discussed their preliminary observations, which appeared to indicate they believe no radical changes to the project's approach are needed. The team observed that there is insufficient planning for the team to fully understand the integration of the waste feed delivery systems. They also noted that some assumptions used to develop unit liter dose values require additional documentation of their justification. In addition, the team wants to get clarification on DOE's policy for only using selective portions of DOE-STD-1189. Lastly, the TAB's representative at the Office of River Protection (ORP) expressed the importance of understanding the effect of shrinking the secured area of the Hanford site to meet the 2015 vision and the assumed distance to the closest public receptor.

The WTP project held the second Safety Input Review Committee (SIRC) meeting this week to evaluate the MAR changes to the PTF. The SIRC showed improvement from the first meeting (see Activity Report 4/3/09) and demonstrated the potential for this forum to be effective in evaluating nuclear safety changes. The TAB review team noted that ORP interactions during this SIRC meeting did not demonstrate their expectations for independent reviews from the separate organizations (contractor and ORP).

A separate SIRC meeting on the compliance with DOE-STD-1066 was scheduled for this week but was cancelled by the contractor. Prior to the meeting being cancelled, the Board's staff reiterated their disagreement with using low consequences as justification for not complying with the standard. In addition, the staff expressed their expectation that a revision to the Recommendation 2004-2 submittal to EM should occur prior to implementing the change.

ORP completed an assessment of the contractor's software quality assurance (SQA) program. The contractor has not fully implemented the SQA requirements although DOE Order 414.1C was added to the contract in October 2006. ORP and the contractor reached an agreement that the SQA requirements must be fully implemented by October 2009. At the outbrief, ORP identified three findings, three observations, and one follow-up item associated with the need to reassess the program after all SQA requirements are implemented. The findings included the failure to adequately train personnel who use and maintain the new Aspen Process Performance Simulation (APPS) software, and inadequate software engineering documentation for APPS. One of the team's observations was that APPS was very dependent on many user interactions and this problem is compounded by a requirement to manually verify all (10,000 for APPS) input values each run if strict compliance to the contractor procedure is maintained.

Washington Closure Hanford: There were three fact findings for events in the 300 Area. Two involved skin contamination of D&D workers and the other was for inadvertently activating a fire alarm system during D&D. The frequency of similar events appears to be increasing in recent months (see Activity Reports 3/20/09 and 3/27/09).