

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 27, 2012

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending January 27, 2012

Board staff members T. Chapman, J. Deplitch, M. Helfrich, and J. Troan were on-site to review the Emergency Management Program.

Waste Treatment Plant (WTP): Earlier this month, the project began a major effort to re-baseline the PDSAs for the Low Activity Waste (LAW) and Analytical Laboratory (LAB) facilities and the Balance of Facilities (BOF). One of the main objectives is to ensure compliance with 10 CFR 830 using methodologies specified in DOE STD 3009. The key documents to be produced or updated are: DSAs (chapters 2 through 5) and TSRs for LAW and LAB; Hazard Analysis Reports (HARs); control decision records; and Fire Hazard Analyses. This effort includes some significant changes to the project's regulatory construct, such as the removal of the Safety Requirement Document from the Authorization Basis, and the creation of an Unreviewed Safety Question (USQ) process to replace the current process to evaluate safety basis changes. Some of these changes require modifications to the contract, and the Office of River Protection (ORP) has requested implementation plans and the new USQ procedure by mid-February. Another significant change is the elimination of the volume of the current PDSA that covers the BOF. The BOF support facilities contain a number of safety systems and these systems will be included in the PDSAs of the main facilities (PTF, HLW, LAW, or LAB) by redefining the safety boundaries of these main facilities to encompass the BOF safety systems. The non-safety support systems of BOF will be covered in the PDSA for general information. The project's schedule highlights completing HARs by December 2012, completing TSRs by September 2013, and submitting all the updated documentation to ORP for their approval by November 2013.

Richland Operations Office (RL): A 15-member joint team of RL and EM personnel completed a review of the Contractor Assurance System (CAS) used by the three RL prime contractors. It was clear that the review was constrained due to its short three-day review duration, but the team was able to deduce that the CASs at the Plateau Remediation Contract and River Corridor Closure projects were generally acceptable. However, significant deficiencies were noted in the CAS at the Mission Support Alliance project.

Spent Nuclear Fuel (SNF): The contractor declared a potential inadequacy in the safety analysis (PISA) for both the Canister Storage Building (CSB) and the Cold Vacuum Drying Facility (CVDF) after they identified errors in the model used to prove that the SNF stored in Multi-Canister Overpacks (MCOs) was sufficiently dry. All MCOs loaded with SNF are in the CSB, but the PISA also impacts planned operations at CVDF.

Tank Farms: An ORP criticality safety engineer identified two findings when performing a reactive surveillance of the contractor's Criticality Safety Evaluation Report (CSER) for operations in tanks that have significant quantities of large and dense plutonium-rich particles. The basic issue is the contractor failed to sufficiently justify that criticality is incredible for the planned operations, but ORP agreed with the contractor that criticality is likely still incredible. The surveillance was conducted after the site rep identified weaknesses in the two CSERs related to operations in these tanks (see Activity Reports 12/23/11 and 11/18/11).