

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2011

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending November 4, 2011

Waste Treatment Plant: The contractor issued management suspension of work (MSOW) documents that suspend design, procurement, or installation of several key systems because of open technical issues. The work suspensions are associated with: control systems for pulse jet mixers; hydrostatic testing of ultra-filtration vessels (UFP-1 A/B and UFP-2 A/B); high-efficiency mist eliminators in the High Level Waste (HLW) facility; instrumentation and control safety systems in HLW and the Pretreatment (PT) facilities; cesium ion exchanger columns and emergency elution systems; various safety-class ventilation (C5V) components in the PT facility; vessel vent systems (PVP and PVV) piping and equipment; the HLW filter cave crane cable reel; piping that transports glass-forming materials; safety systems that provide equipment cooling after a volcanic ashfall event; and some of the components that are credited as fire barriers. The resolution of the issues involves bringing the design into compliance with the safety basis (SB). The declaration of this many MSOWs at the same time is unusual and appears to be in response to the Office of River Protection (ORP) surveillance that questioned the installation of components that did not comply with requirements in the SB (see Activity Report 10/21/11).

The contractor's nuclear safety organization has completed a plan to develop a compliant SB, titled the Integrated Licensing Strategy. The strategy also provides the approach to resolve the findings from the management assessment of the Low Activity Waste SB documents (see Activity Report 6/10/11) and open technical issues with the design such as the items listed above.

Tank Farms: The contractor concluded that the potential inadequacy in the safety analysis related to waste transfers during low temperature conditions (see Activity Report 10/21/11) is an Unreviewed Safety Question. They have prohibited all waste transfers until ORP approves a justification for continued operation (JCO). ORP nuclear safety managers objected to the proposed controls, including monitoring the position of the breaker for the non-safety heat trace rather than verifying the entire heat trace was operational. The contractor revised the JCO and will install equipment and modify procedures to ensure that the components are above 32° F during waste transfers when temperatures are low.

Plutonium Finishing Plant (PFP): The new senior managers at PFP have continued to clearly express to workers and supervisors that safety has the priority over production and work instructions must be explicitly followed as written. An example of the heightened expectation is senior management directed the use of formal critiques to address all problems encountered during work evolutions rather than allowing the less formal post job reviews, which failed to adequately capture lessons learned.

A facility representative new to PFP noted that the posted undress instructions were not consistent with site training in that the removal of the outer set of gloves was not done until late in the doffing process. The contractor is evaluating the situation and will revise the instructions.

Office of River Protection: T. Fletcher was selected to be the ORP Assistant Manager for the Tank Farms.