

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 29, 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 29, 2009

Tank Farms: The contractor presented to the Office of River Protection (ORP) the status of their efforts to close a justification for continued operation (JCO) associated with inadequate commercial grade dedication of equipment in safety-significant (SS) systems (see Activity Report 1/16/09). The approach to close the JCO is predicated on the success of efforts to downgrade existing SS systems to non-safety. The contractor described the proposed changes to controls for steady-state flammable gas and waste leak events. ORP indicated that there may be problems with the reduced pedigree of the controls, including the need to ensure the double-shell tank ventilation systems are adequately maintained if they are not classified as SS. ORP also expressed a concern that buried piping may still need SS leak detectors because, unlike the hose-in-hose transfer lines, the pipes have a long life and leaks would not be as self-evident (see Activity Reports 4/17/09 and 5/1/09).

Waste Stabilization and Disposition Project: The contractors briefed the site rep and the facility representative on the plans to package and ship the Pu-238 drums. The drums were retrieved from the burial ground in 2005, inspected, and placed in interim storage (see Activity Report 10/14/05). The project arranged for these drums to be packaged in casks designed for shipping radioisotope thermoelectric generators (RTGs) and then consolidated with other plutonium at the Savannah River Site. The drums will be loaded into the casks at an existing facility at Hanford, but the hands-on loading operations will be conducted by personnel from Idaho National Laboratory, which owns the RTG casks. The contractor currently believes no formal readiness review will be required but will conduct dry runs of the packaging operation in a few months. The contractor is also using the Unreviewed Safety Question process to ensure that this operation is covered by the current safety basis.

Plutonium Finishing Plant (PFP): The site reps and a facility representative performed a walkdown of PFP with the goal of understanding the breadth of new controls that were recently implemented to prevent workers from potential exposure to beryllium dust. The site rep noted that the potential beryllium contamination signs were on the appropriate glove boxes and hoods but were not on some of the associated HEPA filters.

Waste Treatment Plant (WTP): The site rep observed a contractor meeting where changes to the WTP Test Program were discussed with members of the Joint Test Group (JTG). The JTG will approve test procedures and results for testing of safety-class and SS structures, systems, and components as well as environmental performance. The JTG is still in its nascent stage; little testing has been completed to date and lessons-learned from the few completed tests are being incorporated in the test program. There was significant discussion of the need to use terminology understood by test engineers, such as “verify,” and the need to ensure that they are consistent with the definitions in the Quality Assurance Manual.

The addendum to the Pretreatment Facility Preliminary Documented Safety Analysis that implements changes due to reduced material at risk is scheduled to be approved by ORP by the end of June (see Activity Report 5/15/09).