**DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

February 3, 2012

**TO**: T. J. Dwyer, Technical Director
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives
**SUBJECT:** Hanford Activity Report for the Week Ending February 3, 2012

Waste Treatment Plant (WTP): The site rep observed the first two sessions of the hazard and operability analysis (HAZOP) for the heel management system. The system is being designed to remove solids that could accumulate in the bottom of some vessels. The HAZOP team decided that they will not evaluate potential criticality problems, such as the need for a critically safe geometry in the transfer pump, because they believe this detailed analysis of criticality will be completed at a later time. This approach conflicts with directions from the contractor's nuclear safety manager who said the team should conduct a thorough HAZOP and conservatively identify all potential hazards.

The Office of River Protection (ORP) met with managers from EM, HSS, and the DOE Chief of Nuclear Safety to discuss the process and resources required to review and approve the WTP safety basis, including the final DSA. ORP is developing a charter for a safety basis review team.

The fabrication of the 14-foot vessel for mixing tests will be delayed due to limits on funding this fiscal year. Funding to complete the work is in next year's budget and the contractor believes that the delay will not affect Recommendation 2010-2 deliverables.

Tank Farms: The contractor failed to record temperature readings required by a waste transfer procedure to protect pipes from freezing. The temperature monitoring was recently instituted as part of a justification for continued operation for waste transfers (see Activity Report 11/18/11). An operator failed to record the required data because of confusing instructions on the data sheet. The supervisor identified the error a few minutes after the required completion time. Contractor management initially classified the event as a TSR violation, but both the contractor and ORP are evaluating if this should be reclassified as a failure to follow procedures.

Waste Receiving and Processing Facility: The contractor conducted a critique to investigate an event in which a worker received a shock while doing preventive maintenance (PM). The PM was to calibrate instruments associated with stack monitoring. The wiring that caused the shock was low-voltage data cables, but after the event, it was discovered that these wires carried 79 Vac. During the critique, it was also disclosed that the cabinet had 120-Vac electrical lines still energized and the site rep questioned why this electrical source was not tagged out as part of the PM. The RL facility representative and electrical subject matter expert committed to investigate this work practice.

209-E Critical Mass Laboratory: The contractor completed the root cause analysis for the premature cancellation of the DSA for the facility (see Activity Report 10/21/11). The identified root cause was inadequate planning for the transition from Surveillance and Maintenance (S&M) to active D&D. They noted poor nuclear safety oversight and that an independent verification review should have preceded the DSA cancellation. Both DOE and the contractor are capturing lessons learned for future D&D of nuclear facilities.