DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 11, 2011

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending February 11, 2011

Board staff members A. Poloski and S. Stokes were on-site to observe a management assessment of the safety control strategy at the Low Activity Waste facility at the Waste Treatment Plant. They also discussed the Low Order Accumulation Model benchmark test program.

Plutonium Finishing Plant (PFP): The facility experienced a shortage of hand-held radiation monitoring instruments during three concurrent contamination events last week. Instruments normally set aside for emergency use were already being used to support scheduled work. None of the contamination events had significant consequences, but the shortage of the instruments was an indicator of a significant resource problem at PFP. The contractor's corrective actions included obtaining additional instruments and a focused effort to decontaminate previously contaminated instruments. The site rep was told by a contractor manager that the failure to ensure the availability of an adequate number of instruments was probably related to the lack of a permanent manager responsible for radiological controls (rad con). There has not been a permanent rad con manager at PFP since June 2010, and this may be the cause or contributor to this and other rad con problems at PFP. The site rep requested the analysis that verifies the increased number of instruments is adequate.

Last week, a rad con technician (RCT) declared a stop work when unplanned movement of waste from the D&D activities challenged her ability to ensure that all radiological work activities in the immediate area was being performed safely and compliantly. However, workers did not cease working as required by the site-wide procedure. PFP managers reiterated the need to workers that they need to cease work when a "stop work" is declared.

Tank Farms: Contaminated residue is leaking from the AY and AZ tank farm ventilation system HEPA filter enclosures and has created high-contamination areas. The residue appears to be ammonium nitrate that has built up in the enclosure over time, but no samples have been analyzed since 2006 (see Activity Report 7/21/06). It is not clear why the residue was allowed to accumulate over the past five years and the site rep questioned if the build-up could have negatively impacted the HEPA filters.

Waste Receiving and Processing Facility (WRAP): Last week, the Hanford Fire Department (HFD) took actions to clear a trouble signal on a safety-significant fire suppression system without informing the facilities Duty Operations Supervisor (DOS). The HFD was responding to a trouble signal on a dry-pipe suppression system for a WRAP TRU waste storage facility and, while trying to clear the signal, inadvertently flooded the dry-pipe system. They proceeded to secure the water supply to the system so they could drain the lines. HFD personnel then informed the DOS that the fire system was no longer operational and the DOS entered the limiting condition of operation, implemented a fire watch, and placed the facility into standby mode.