

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 30, 2009

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending October 30, 2009

Tank Farms: The Office of River Protection (ORP) concurred with the contractor that over-pressurizing the waste transfer system with the AN-101 pump is not credible, and they lifted the hold on conducting transfers with this system (see Activity Report 10/23/09). ORP is relying on safety management programs credited in the DSA for limiting the frequency of the pump's variable frequency drive (VFD). The frequency limit on the VFD prevents running the pump at the maximum discharge pressure and damaging safety-significant system components. With ORP concurrence, the contractor restarted the operational acceptance testing of the pump.

Additionally, the contractor determined that the design for the AN-101 pump backflow preventer (BFP) failed to address blockage in the seating surfaces of check valves as a credible failure mechanism. This problem, which actually occurred, will need to be included in the DSA as a new failure mechanism. The contractor submitted and ORP approved a Justification for Continued Operation (JCO) that includes a compensatory measure of isolating the BFP shortly after starting the pump. ORP cited minimal safety risk and the need "to support specific critical waste transfer and retrieval activities." ORP's approval of the JCO expires on January 31, 2010, when the DSA changes should be implemented to resolve the issue, but the site reps question if it is truly critical to perform transfers with this pump during the next three months.

The ORP Safety Review Board (SRB) continued its review of the major changes to the DSA being planned for final implementation in January. The SRB directed the addition of a specific administrative control on the frequency limits for all waste transfer pumps powered by VFDs.

Office of River Protection: ORP completed an internal independent assessment of their implementation of DOE O 226.1A, and concluded that they are performing the activities described in the Order but identified four findings. The findings include: the ORP quality assurance program did not provide independent assessment of nuclear safety, environmental compliance, and health and safety; the management assessment process was inadvertently removed from ORP's assessment procedure, and while ORP organizations did self-assessments, several organizations did not do structured management assessments; and lessons learned are not consistently disseminated to all the appropriate ORP organizations.

Richland Operations Office (RL): Two RL employees inadvertently entered a high contamination area (HCA) while conducting a walkdown of an empty storage vault. The vault (Gable Mountain Plutonium Vault) was once used to store plutonium but has been inactive and empty for years. The vault has residual contamination and the River Corridor Closure Contractor (RCCC) is preparing plans to decontaminate the facility. The entrance to the HCA was poorly posted and the employees only noticed the posting when exiting the vault. The RCCC conducted surveys and no personnel contamination or spread of contamination was found. The employees were not accompanied by contractor support personnel or an RL Facility Representative.