

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 25, 2013

TO: T. J. Dwyer, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending January 25, 2013

Plutonium Finishing Plant. The contractor is still recovering from the spread of contamination that occurred when removing portions of a highly contaminated HEPA filter from a glovebox (see Activity Reports 1/4 and 1/11/2013). Workers performing recovery actions in this room are wearing self-contained breathing apparatus because of very high airborne contamination levels. The loose surface contamination levels have been as high as 3,200,000 dpm alpha/100 cm² and 10,000,000 dpm alpha for large area swipes. This contamination is easily mobilized, i.e. flighty. The contractor has been spraying fixative in the room to reduce airborne contamination concentrations as they remove contaminated items. They plan to more robustly fix the loose contamination by painting the surfaces in the near future and are evaluating the use of supplied air respirators to increase the worker's stay time during cleanup operations.

Tank Farms. The contractor plans to declare that they have implemented the safety basis revision that begins the restoration of the double-shell tank ventilation systems to safety significant. The Office of River Protection approved these changes in 2011 (see Activity Report 12/9/2011) with an implementation date of January 31, 2013. The last remaining action in this process is measuring actual air flow rates from each tank to verify adequate ventilation flowrates. If these measurements are not completed, the contractor plans to declare implementation complete, but immediately enter into a Limiting Condition for Operation and develop a recovery plan for the specific systems that have not had their flows verified.

100 K Area. The contractor concluded they created an unanalyzed condition when they excavated a deep trench around the perimeter of the K East Reactor Building. The multi-year activity to dig this trench was intended to remove contamination and below grade equipment. Contractor nuclear safety personnel questioned if the structural analysis for the K East Reactor Building addressed this removal of the surrounding soil. The Management of Change Process, similar to an Unreviewed Safety Question Process, for this less than Hazard Category 3 facility failed to ensure that an engineering analysis was performed prior to removing the soil. Such an analysis should have been done and included an assessment of the structural stability of the building with the soil removed during seismic events.

One System. The Nuclear Safety Steering Committee for the One System, which is composed of both Tank Farms and Waste Treatment Plant (WTP) contractors, met this week with their corporate counterparts. Their goal was to reach consensus on proposed recommendations for improving the interface and consistency of the Tank Farms and WTP safety bases (see Activity Report 4/27/ 2012). The committee approved several recommendations related to topics including: event durations, chemical dispersion, functional classification of systems that support safety systems, and administrative control requirements. These proposed recommendations will likely be submitted to the Office of River Protection for review.