

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 16, 2013

**TO:** S. A. Stokes, Acting Technical Director  
**FROM:** D. Gutowski and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending August 16, 2013

Board staff member M. Helfrich was on-site to observe the emergency management annual graded field exercise. Board staff members T. Hunt and D. Shrestha were on-site observe the contractor's effectiveness review of the corrective actions for issues related to the conduct of maintenance at the Waste Encapsulation and Storage Facility and observe the field exercise.

**Waste Encapsulation and Storage Facility (WESF).** The contractor's oversight team completed the effectiveness review of the corrective actions associated with weaknesses identified in a Board letter dated 10/6/2011. Completing this review is the last corrective action for the issues noted by both the Board's review and subsequent DOE and contractor reviews. At the outbrief, the team concluded that actions taken at WESF were effective. They identified a number of strengths, including training and management changes. The team also identified a number of opportunities for improvement. These include developing work instructions that strike the right balance between relying on known worker qualifications (i.e. skill of the craft) versus the need to document details proving system operability.

**Emergency Management.** The site reps and staff observed DOE's and the contractors' actions during the annual graded exercise. The scenario was a large seismic event with an epicenter on the north end of the site. The exercise focused on how the site's emergency responders and the Emergency Operations Center would deal with concurrent problems of varying magnitude across the entire site. The WESF facility fully played in the exercise, but events and actions at other facilities were simulated by exercise controllers.

**River Corridor Project.** The contractor had two corporate experts perform an in-process review of the lift plans for the Building 340 vault (see Activity Report 7/26/2013) and the Building 309 Plutonium Recycle Test Reactor. The experts made a number of recommendations, such as resampling the soil under the lifting equipment shortly before the lift begins to ensure it still matches the original design basis conditions and developing contingency plans that address issues such as spalling or cracking of the concrete vault after it is initially lifted. The experts suggested they should verify the adequacy of the lift plan when it is finalized.

The contractor identified an error in a spreadsheet used to determine if soil removed from the 618-10 Burial Ground trenches should be considered radioactive material when it was transported to the onsite burial ground. The contractor and personnel from the Richland Operations Office clearly understood that corrective actions from past spreadsheet errors at this facility were not effectively implemented (see Activity Report 5/3/2013).

**Tank Farms.** The contractor resumed retrieval efforts for single-shell tank C-110, which has been dormant since the contractor determined they had retrieved waste to the limits of the first retrieval technology in early 2009. The remaining hard-heel waste from C-110 will be transferred to double-shell tank AN-106 using continued sluicing augmented by a mobile in tank crawler known as a Foldtrack. The Foldtrack has been modified from the previous model that operated briefly in tank C-109 (see Activity Report 6/6/2008).