

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2007

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending June 29, 2007

R. Quirk was off-site this week.

Solid Waste and Disposal Project: The site rep conducted a walkdown with contractor project management of a new drum venting station in the Central Waste Complex. The drum venting station is contained in a structure similar to a cargo container and is designed to be easily relocated. It contains three venting stations: two for 55-gallon drums and one for 85-gallon drum over-packs. Each station has a glovebag surrounding the drilling area and hoses connecting the glovebags to a HEPA vacuum that vents any built-up volatile organic compounds or hydrogen to the atmosphere. The contractor is working to answer the following open site rep questions: is the HEPA vacuum rated as explosive-proof; will automated fire detection be required in the venting station; and, how much material at risk is allowed in the venting station based on hazard analysis? The project is targeting start of operations in mid-July.

K Basins Closure (KBC): The site rep observed mock-up training for the divers preparing for work in the K East Basin. The training is being conducted at an uncontaminated settling pond in K Area and efforts have been made to closely simulate the conditions that will be encountered at the basin. In general, the divers and the support teams were able to perform steps as written and demonstrated good conduct of operations. This training session was also observed by senior contractor management and a team conducting a Human Performance Initiative (HPI) review of work activities. The HPI review team, composed of both Office of River Protection and Richland Operations Office members, is using an approach proposed by the Institute of Nuclear Power Operations that identifies critical steps, error precursors, and potential consequences, and evaluates the defenses.

Tank Farms: The 242-A Evaporator was scheduled to start back-to-back campaigns to process waste from two double-shell tanks but has been hampered by mechanical failures. The most recent problem was a failure of the process condensate pump. The evaporator run is scheduled to last about 40 days and will reduce waste volume by as much as 1.2 million gallons.

Waste Treatment Plant (WTP): This week a 60-percent design review was conducted of the Engineering Scale Pretreatment System (ESPS). The ESPS is being constructed to address concerns expressed by the External Flowsheet Review Team on the undemonstrated oxidative leaching and ultrafiltration processes. There was considerable discussion on whether the ultrafilters could be tested in a vertical arrangement rather than the current horizontal configuration. It was also apparent during the meetings that the design, construction, and testing of the ESPS will help uncover weaknesses in the current design of the Pretreatment facility.

Senior contractor management announced that Greg Ashley has been named as the WTP Manager of Engineering, effective July 16, 2007.