

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 14, 2007

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending September 14, 2007

The Board's staff member J. Troan and D. Gutowski were on-site reviewing the Demonstration Bulk Vitrification System and S. Lewis was on-site augmenting site rep coverage.

Tank Farms: The DOE Type A, Tank Farms Contractor event investigation, and the Project Hanford Management Contractor teams are finalizing their reports for the waste spill at S-102 (see Hanford Activity Report 7/27/07). The final reports should be issued next week.

The site rep observed mockups for removing free liquids from the dilution hose which is believed to be the source of the spill. The contractor plans to use a spool-shaped roller as a tool to reduce the dose to the operators. The hose will be elevated to waist-level using the roller, facilitating the draining of the waste to a HEPA-filtered drum. It is unclear that this approach will remove all free liquids if significant quantities of waste have gelled in the hose. The hose will be stored in a shielded box for up to 90 days and then disposed of as waste unless the Type A team directs that the hose be analyzed to confirm that it was the source of the leak.

As requested by the Type A team, samples of the waste from the dilution hose will be analyzed to better understand the potential health consequences from the spill to the nearby workers.

In response to the contractor's review of the emergency management aspects of the spill (see Hanford Activity Report 8/31/2007), significant revisions to the abnormal operating procedures (AOPs) for high radiation and spills were approved this week. The changes to the immediate actions of the AOP were made to drive a more conservative decision-making process by assuming that the cause of high radiation is from a spill until proven otherwise, and directing actions that would ensure the earlier involvement of support organizations.

Last week the 242-A Evaporator completed two back-to-back campaigns which reduced tank waste volume by approximately 1.24 million gallons. The campaigns were initially delayed by mechanical failures and the contractor had to overcome problems encountered during operations (see Hanford Activity Reports 6/29/07 and 7/13/07).

Waste Treatment Plant (WTP): The contractor paused work involved with welding on thin metal less than 1/8-inch thick because it was discovered that their weld control manual and engineering specifications did not contain provisions for these thinner metals. The contractor is reviewing weld packages that could be effected, evaluating the extent of condition both on-site and at vendor shops, and making corrections to the weld procedure.

River Corridor Closure Project: The site rep observed a contractor emergency preparedness drill conducted in the 300 Area. The principal purpose was to practice timely and effective emergency notification. The emergency response from the workforce appeared improved but some opportunities for improvement in communications were noted.