

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 30, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending November 30, 2007

Tank Farms: DOE released the Low Activity Waste (LAW) Treatment Business Case Evaluation that compares four primary supplemental treatment approaches (see Hanford Activity Report 5/4/07). The four approaches described are: a second WTP LAW facility, bulk vitrification, cast stone, and steam reforming. Another option evaluated is modifying the WTP LAW facility to increase throughput. DOE has not yet selected an immobilization process to supplement the WTP LAW facility, but the report discusses that without supplemental treatment the mission to immobilize Hanford tank waste will continue until 2079.

The contractor held control decision meetings to determine how best to resolve a comment in the Type A Report regarding the need to designate primary pressure boundaries of tank waste systems as safety-significant. The meetings included discussions on controls for existing and new equipment. Also discussed was a clearer definition of “physically connected” to waste systems as noted in the Technical Safety Requirements.

The Office of River Protection directed the contractor to develop a plan to improve the conduct of operations in the tank farms. The direction was in a letter dated November 21, 2007, and referred to problems identified with the S-102 tank waste spill and recent problems noted by the site rep and outside expert during a focused conduct of operations review earlier this month (see Hanford Activity Report 11/9/07).

River Corridor Closure Project: The project completed the first of three transfers of fuel found in the 100 B/C burial grounds. The fuel was transferred into the basin of K West for storage with the fuel found during sludge retrieval. Cold temperatures and problems with radiological controls hindered the progress of this work (see Hanford Activity Report 11/23/07). The fuel in K West Basin will be placed in multi-canister overpacks, dried in the Cold Vacuum Drying Facility, and sent to the Canister Storage Building next year.

K Basins Closure (KBC): The project continued sluicing the sand filter media at the K East Basin into a large diameter container but have experienced difficulties in maintaining the desired flow rate. The cause for the reduced flow is being evaluated.

Radiochemical Processing Laboratory (RPL): The responsibility for the nuclear safety approval for the RPL (Building 325) was transferred from the Office of Environmental Management (EM) to the Office of Science (SC). The site reps met with the manager of the Pacific Northwest Site Office (PNSO) to discuss the plans for oversight of nuclear safety and the maintenance of the safety basis. The Richland Operations Office previously provided oversight of the safety basis, but PNSO will use Integrated Support Center personnel, based in Oak Ridge and Chicago, to provide the required oversight. In addition, PNSO is creating a local Safety System Oversight position specifically for the RPL and is hiring an additional facility representative to provide operational oversight.