

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 24, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending August 24, 2007

The Board's staff member S. Lewis was on-site to assist with site rep duties.

Tank Farms: The DOE Type A investigation team started their investigation of the waste spill at S-102 tank (see Hanford Activity Report 7/27/07). The team is reviewing all aspects of the spill, including the cause of the spill, emergency management, health effects from the spill, conduct of operations, maintenance and engineering, and oversight by the Office of River Protection (ORP).

The contractor determined that the spill was a Technical Safety Requirements violation.

A Potential Inadequacy in the Safety Analysis was declared because pressurizing a fluid below the solid surface of the tank waste could cause a spill via various tank penetrations, such as transfer pump sparge and dilution lines, self-lancing thermocouple trees, and dip tubes, but this had not been analyzed in the Documented Safety Analysis.

The contractor continues to plan for the cleanup of the spill area. Planning, including shielding and contamination control considerations, is being conducted for the removal of the potentially contaminated items, such as hoses, scaffolding, stairs, jersey barriers, and the soil.

Waste Treatment Plant (WTP): The contractor is preparing an Authorization Basis Amendment Request for tailoring requirements from DOE Standard 1066, *Fire Protection Design Criteria*. The standard indicates two stages of final HEPA filtration, fire sprinklers (a deluge spray system) to protect the HEPA filters, and two-hour, fire-rated boundaries around the filter plenums unless justified in the fire hazards analysis and approved. The contractor believes they can demonstrate that tailoring of the criteria will not significantly increase the risk to the worker, public, or the environment by analyzing each fire area affected by the criteria.

River Corridor Closure Project: An external review team completed an independent assessment of the contractor's preparations for Integrated Safety Management Systems (ISMS) Phase II Verification scheduled to start in November. The team noted some strengths but identified weaknesses in conduct of operations, surveillance of safety basis commitments, and a potential for complacency and improper responses to unexpected conditions.

The site rep met with the contractor to discuss the safety controls being planned for remediation of the 618-7 burial ground. Since the site rep expressed concerns late last year (see Hanford Activity Report 12/8/06), the project has completed additional characterization, hazard analysis, emergency preparedness planning, and designed additional safety controls. Detailed job hazard analysis and work procedures are not completed but are expected to be in place prior to the start of mock-up training and drills scheduled to start in early October.

K Basins Closure Project: The Board's staff attended a Plant Review Committee meeting of the K Basin Closure (KBC) project that discussed downgrading the K East Basin facility from Hazard Category (HC)-2 to less than HC-3. The contractor completed its review of the hazard analysis and plans to submit it to the Richland Field Office for review.