

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 22, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending January 22, 2010

Staff members A. Poloski and S. Stokes were on-site to review plans to resolve issues with mixing at the Waste Treatment Plant (WTP) and to walk down the facilities under construction.

Tank Farms: The Office of River Protection (ORP) issued the safety evaluation report (SER) for the major changes to the Tanks Farms DSA first submitted in September 2009. The intent of the changes is to: bring the DSA into compliance with requirements for specific administrative controls; incorporate new evaluation guidelines, which permit the downgrade of some existing safety-significant (SS) systems to defense-in-depth; resolve Justifications for Continued Operation (JCOs); and add a new TSR-level control for criticality safety. The SER also requires the contractor to implement a change approved in July 2008 that was never implemented. This change required the primary pressure boundary for waste transfers to be SS. Finally, ORP directed some relatively minor changes to the DSA, including deleting the ability to screen out accidents from analysis just because there are multiple non-credited barriers. The SER requires the submittal of another revision to the DSA by June 1, 2010, for incorporating these additional requirements imposed by ORP. ORP also noted that the methodology for analyzing a spray leak is more conservative than those used for WTP.

Sludge Treatment Project: The project completed the review of the conceptual design for removal of sludge from the engineered containers in the basin and shipping it to the central plateau for storage. The site rep noted that the consensus standard for the SS instrumentation, ANSI/ISA 84.00.01, was not identified as one of the codes that will be used in the design. DOE is evaluating if ANSI/ISA 84.00.01 and the related draft DOE standard should be required.

Richland Operations Office (RL): The site reps met with the Assistant Manager for Safety and Environment (AMSE) to discuss RL's new oversight approach. The new approach was a result of a self-assessment conducted in response to the event at Building 336 in which a worker was seriously injured in a fall. The new approach will focus on strengthening the contractor's oversight programs because RL does not have the resources to oversee all ongoing activities. An important part of the plan is to mobilize RL subject matter experts and safety system oversight personnel and have them work with the fac reps to identify and address weaknesses in the contractor's oversight and corrective action management programs. The AMSE committed to maintain adequate field oversight while attempting to strengthen the contractor's oversight.

River Corridor Closure Project: Contamination was found on clothing of workers preparing to collect characterization data for vertical pipe units (VPUs) at the 618-10 burial ground. The source of the contamination was a test probe withdrawn from a casing. The highest readings found on the clothing were 300,000 dpm beta/gamma and 1000 dpm alpha. In December, the contractor found contamination in another casing adjacent to the same VPU (see Activity Report 12/11/09) but was unable to determine the exact source because the casings are designed to be sealed from the surrounding contaminated soil. After the earlier event, a number of weaknesses were identified, including not using a radiological work permit. It appears further strengthening of the prior corrective actions for radiological practices may be warranted.