

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 11, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 11, 2010

Board staff members A. Poloski and S. Stokes were on-site observing an independent review of design for mixing in vessels containing non-Newtonian waste at the Waste Treatment Plant.

Solid Waste Operations Complex: The contractor concluded there was a TSR violation because of a programmatic breakdown in the Abnormal Container Management Program (ACMP) after a number of non-compliances with the procedure used to implement the administrative control were identified. Drums were entered into the program because they were reclassified as TRU waste or corroded but were not properly labeled, segregated, or vented as required by the program. The first issue was identified by the contractor in March, which led to a reactive surveillance by the facility representative (FR). The FR noted additional problems that prompted an extent of condition review by the contractor in which more problems were identified.

The contractor is supporting the Central Characterization Project (CCP) effort to procure and use high-energy, real-time radiography equipment to certify TRU waste for shipment to the Waste Isolation Pilot Project. This new equipment has significantly higher power than the equipment currently in use (roughly an order of magnitude higher) and will require thick shielding during operation to protect workers. The equipment will be operated by CCP and will be housed in a new structure near the Waste Receiving and Processing Facility. The safety controls include 8-foot-thick walls for shielding and an interlock that prevents the access door from being open during operation. It is not clear how this new equipment and controls will be addressed in the existing safety basis.

Tank Farms: The Office of River Protection issued an assessment report that identified significant problems in the contractor's radiological controls program. The assessment lasted more than two months (see Activity Reports 3/12/10 and 4/16/10) and identified programmatic deficiencies in the following four areas: radiological work planning, radiological work performance, emergency management, and corrective action management. The report also acknowledges corrective actions the contractor initiated during the assessment.

Waste Treatment Plant: The contractor sponsored an independent review team to evaluate the adequacy of the mixing design for the five non-Newtonian vessels. The team's stated goal was to decide if they concur with the project's recently completed assessment that determined that these vessels will meet the mixing design specifications. The contractor asked the team to provide a draft report by June 14, less than a week after the start of the review. Although the team is working to provide substantive recommendations, they stated they were not conducting a design review because of short allotted time and the extensive quantity of supporting technical information.

Sludge Treatment Project: The contractor completed the retrieval of sludge from the 10 settler tube tanks into an engineered container in the 100 K West Basin. The contractor will complete borescopic inspections of the tanks to verify they have removed essentially all of the finer sludge particles that were collected in these tanks during the spent fuel cleaning processes.