

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 11, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 11, 2013

Waste Treatment Plant (WTP). The site rep observed a meeting of the Safety in Design Integration Team (SDIT) that is developing the Safety Design Strategy (SDS) for the High Level Waste (HLW) facility (see Activity Report 9/27/2013). SDIT members are nearing completion of an initial activity to identify and document all technical issues with the HLW facility. They are also developing preferred control strategies for classes of accidents. SDIT members are being trained on key DOE requirements related to safety basis development as well as the existing Preliminary Documented Safety Analysis for the HLW facility.

River Corridor Project. In response to questions from the site rep, members of the SDIT for the remediation of the vertical pipe units (VPUs) in the 618-11 said testing to support the safety analysis did not need to meet requirements of NQA-1. The “decisional draft” Documented Safety Analysis for retrieving waste from the 618-11 burial ground notes testing must be performed to validate the assumption that waste in the VPUs will be adequately mixed with soil before placing it in 55-gallon drums. Later, the contractor’s quality assurance manager communicated to the site rep that statements from the SDIT members were inaccurate. He said his staff would ensure the mixing test complies with their internal testing procedure, which meets NQA-1 criteria.

Tank Farms. The contractor is continuing efforts to address hydraulic fluid leakage from Extended Reach Sluicer Systems (ERSS) during single-shell tank retrieval activities (see Activity Report 1/6/2012). The proposed primary cause for this leakage is electrostatic discharge due to the movement of non-conductive hydraulic fluid through non-conductive hosing. New ERSS systems to support continued retrieval from tanks C-111 and C-112 will use a new hydraulic hose formulation that is more electrically conductive. The potential safety impacts of substantial amounts of hydraulic fluid accumulating in the tanks include inadvertent criticality, flammability of evaporator feed, and future compliance with WTP feed requirements. The hydraulic fluid currently in use degrades in the caustic tank waste the contractor does not believe that it poses any hazard for the tank farms. Office of River Protection (ORP) personnel are evaluating the implications of hydraulic accumulation.

100 K Area. The Richland Operations Office (RL) approved the final hazard categorization report for the K East Reactor Building during Interim Safe Storage (ISS). They also concluded that the contractor met the step-out criteria for the associated hazard category (HC)-3 safety basis (see Activity Report 9/18/2009). In a departure from the process used to place previous reactors into ISS, the contractor will build an independent building around the K East Reactor Building. This new steel framework and sheet-metal paneling building will be on a new foundation with no structural connection to the existing building.

Site Office Management. Several senior ORP and RL managers exchanged positions this week. J. Dowell is now ORP Deputy Manager. S. Charboneau is now Assistant Manager for Safety and Environment at RL. R. Corey is now Assistant Manager for River and Plateau at RL.