

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 19, 2014

TO: S. A. Stokes, Technical Director
FROM: P. Fox, D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending September 19, 2014

242-A Evaporator. The evaporator entered a Limiting Condition of Operation (LCO) when contractor engineers declared that the flammable gas control system was inoperable. A pressure indicator was providing erratic readings above the 200 torr safety limit. The contractor dumped the evaporator vessel back to the feed tank and entered shutdown mode to exit the LCO. Following flushing of several components, the evaporator returned to operations mode and is close to completing the first pass concentration of waste from AW-102 to AP-107.

Plutonium Finishing Plant. A Continuous Air Monitor (CAM) alarmed while workers were lowering an assembly of chemical process piping that had been attached to a glovebox. The level on the CAM jumped quickly from less than one DAC-hour to 5600 DAC-hour in a room that was controlled as a High Contamination Area and Airborne Radioactivity Area. Workers evacuated the room as required. Alpha contamination levels as high as 200,000 dpm/100cm² were found on the outer set of worker PPE and up to 3,000 dpm/100cm² were found on the inner set. No contamination was detected on the worker's personal clothing. The contractor activated the technical response team to plan a recovery which is expected to start on Friday evening.

Waste Treatment Plant (WTP). ORP approved the Ashfall Working Group charter (see Activity Report 9/12/2014) and the group has started identifying sustainable options for addressing the ashfall hazard. The working group is approaching the problem from two directions. First, recent work by U. S. Geological Survey and Pacific Northwest National Laboratory indicate that the ashfall hazard is substantially higher than previous estimates making previously considered hazard control methods for WTP facilities unworkable. Consequently, the group is evaluating and attempting to refine the magnitude of the ashfall hazard. Second, they are identifying potential design options to mitigate the increased hazard.

Office of River Protection. ORP briefed DOE headquarters personnel on the proposed approaches by ORP contractors to implement the newest version of the DOE quality assurance order, 414.1D (see Activity Report 5/10/2013). The tank farms contractor plants to implement the new revision by the end of this year. The analytical contractor for the 222-S Laboratory will not implement the new order during the current contract period. ORP proposed that the WTP contractor implement 414.1D following the readiness review for the Low Activity Waste Facility. The WTP contractor has instead suggested beginning implementation immediately before the readiness process begins.

Waste Encapsulation and Storage Facility (WESF). Contractor personnel entered the WESF Canyon this week to perform surveys and remove combustible waste (see Activity Report 7/25/2014). The removal of the combustible waste represents a substantial improvement in the facility's safety posture. They will perform one more entry next week to characterize the current structural condition of the canyon.

Tank Farms. The contractor started the first preliminary hazards analysis supporting future retrieval processes in A and AX farm.