

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 23, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending November 23, 2007

Solid Waste Operations Complex (SWOC): The project generated a management concerns occurrence report with a significance category of Recurring due to events related to compliance with Technical Safety Requirements (TSRs). Six reportable events have occurred between March 26 and November 15, 2007 that have common factors. The six reportable events include the following failures to comply with Administrative Controls (ACs) (see Hanford Activity Reports 9/7/07, 11/9/07, and 11/16/07): staging of propane in excess of AC limits near a waste storage area, using two forklifts that exceeded annual inspection dates, and the discovery of a drum outside the hydrogen venting area prior to the end of its abatement period.

Tank Farms: The contractor completed a Process Hazards and Operability Analysis (PrHOA) of the current Demonstration Bulk Vitrification System design. Some new safety-related structures, systems, and components and specific ACs were proposed and some controls from the prior PrHOA were eliminated. The revised approach is primarily due to changes to the design and lessons learned during the integrated dryer/melter test.

The contractor started removing equipment from inside the high radiation area/high contamination area that resulted from the S-102 tank waste spill. The work planning team for soil excavation is evaluating equipment that can break up the contaminated soil that has been immobilized by repeated applications of fixative.

River Corridor Closure Project: Work activities to package and move found fuel at 100 B/C Reactor was stopped when it was discovered that a worker exceeded the Radiological Work Permit (RWP) limits for dose rate. The worker discovered that the RWP dose rate limit had been exceeded at the end of the shift during the download of data from electronic dosimetry (read 563 mrem/hr, limit was 500 mrem/hr). The dosimeter had an alarm set at 400 mrem/hr, but no alarm was heard. The worker's total dose, 15.6 mrem, for the day was less than the RWP limit. The project is investigating why no alarm was heard, and is modifying the package to reduce the potential for exposure. No formal fact-finding meeting was held because management determined the event did not require one, but the site rep and DOE fac rep asked for and were briefed on the event.

Plutonium Finishing Plant (PFP): The site reps met with contractor management to discuss a fire protection exemption request for a proposed new storage location for loaded 9975 shipping containers at PFP. The request to the Richland Operations Office (RL) addresses the site requirement to have fire sprinklers in structures that contain hazardous material. DOE-STD-1088 recommends the use of sprinklers (a should statement), but RL previously inserted a requirement (shall) for sprinkler use in the contractor requirements document for DOE Order 420.1. A fire hazard analysis was completed and the exemption request lists a number of safety-class design features and ACs to justify the exemption from the RL requirement.

K Basins Closure (KBC): The project commenced sluicing of the sand filter media at the K East Basin into a large diameter container (LDC). The LDC will be sent to T Plant where the sand filter media will be treated for disposal.