

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 29, 2000

TO: K. Fortenberry, Technical Director

FROM: M. Sautman and S. Stokes, Hanford Site Representatives

SUBJ: Activity Report for the Week Ending September 29, 2000

Plutonium Finishing Plant (PFP): The contractor readiness assessments (RA) to start the bagless transfer system (BTS) and for packaging plutonium to the 3013 standard and the supercritical fluid extraction (SFE) system for determining moisture content of plutonium samples were begun this week. Operation of these systems was demonstrated successfully during the RA. However, realism of the operation was impacted by simulations resulting from uncompleted construction in the room and the glovebox containing these systems. On 9/26/00, a drill was conducted which simulated a leaking bagless transfer canister identified during the test following packaging completion and transfer out of the glovebox. Drill performance was degraded by radiological control deficiencies some of which were due to simulations and by the failure of the drill team to be sufficiently self-critical. The RA completed on 9/29 and prestart findings included issues in the following areas: fire safety, glovebox readiness, criticality limits, drill performance, functional roles and responsibilities, and verification of process feed quality. (3-A)

Spent Nuclear Fuel Project (SNFP): The contractor operational readiness review (ORR) for the K-West Basin and Canister Storage Building (CSB) was initiated on 9/28/00. CSB operations were conducted on 9/28-29/00 (offload the MCO from the transport trailer and place it into an MCO storage tube). Preliminary observations indicate that operators performed these activities safely and within procedures however, full proficiency with procedures and working in a radiation area still require some further practice. The ORR is ongoing over the next week.

The K-West basin Integrated Water Treatment System/Fuel Retrieval System demonstration was successfully conducted this week. This was the last pre-start activity from the Phase III/IV RA. DOE-RL is currently evaluating the RA results prior to authorizing activity start-up.

The Multi-canister Overpack Loading System (MLS) suffered a major equipment failure this week halting proficiency training. The failure occurred while lifting a basket from the shuttle in preparation for placement in the MCO (the basket lifting device failed to stop moving upwards when the upper limit switches were contacted). Preliminary indications are that the failure was caused by a software error that went undetected during system testing. This diagnoses is still under investigated however, the fault was re-created using the MLS simulator. Inspection of the load path to determine the extent of equipment damage and cannibalization of spare parts from the K-East MLS is also ongoing. Complete repairs will be required for the continuation of the contractor ORR (this was a pre-start punchlist item). (1-C)

cc: Board Members