

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 16, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending February 16, 2007

A. Highly Enriched Uranium Materials Facility. Late last week, project personnel identified that floor slab dowels were not installed as required to tie in with wall rebar around a facility door location (additional dowels were not installed to compensate for the interrupted rebar). A Non-Conformance Report is being processed for this condition (initial evaluation by BWXT indicates that the as-constructed condition will be acceptable). The site reps. met with YSO and BWXT personnel this week to discuss the quality assurance aspects of this event. The slab placement was performed in October 2006 and was subject to quality control inspections by the construction contractor and BWXT oversight personnel. Project personnel noted that it appears that construction and oversight personnel interpreted the design drawings to not require the additional dowels although an applicable note in the design drawings requires additional rebar and other slab placements at doors requiring the additional dowels/rebar met that requirement. BWXT evaluation continues and lessons-learned from this event have yet to be determined.

B. Wet Chemistry Spill - Update. As noted last week, several liters of enriched uranium solution leaked from product storage tanks associated with the secondary extraction process. The product storage tanks are configured to receive solution from an elevated receipt tank that overflows (by design) to these (parallel) storage tanks. It appears that an unintended transfer from the elevated tank to the parallel storage tanks occurred. The transfer increased tank levels to certain upper glass section flanges of the tanks that were leaking and resulted in the spill. To stop the leak, BWXT personnel reduced the tank levels by transferring solution back to the elevated receipt tank and draining some solution from the system. A watch was established to inspect the storage tanks every two hours while the investigation of the spill continued.

On Tuesday this week, tank level was observed to be increasing in one of the parallel storage tanks and a few ounces of enriched uranium solution again leaked from the top flange. BWXT personnel took immediate action to reduce the tank level and subsequent action to cleanup this small spill. It appears that the transfer of solution back to the elevated receipt tank that occurred last week set up conditions to allow the unintended transfer to recur. Also, operations personnel had isolated the common header for the storage tanks such that the transfer from the elevated receipt tank only flowed to one storage tank. This exacerbated the level increase during the second unintended transfer. BWXT has now un-isolated the leaking tanks and drained additional solution such the tank levels are not expected to reach the glass section leakage sites should another unintended transfer occur. BWXT investigation continues.

C. Site-Wide Fire Protection. The staff and site reps. discussed the proposed path forward for the ten-year fire protection comprehensive corrective action plan with Y-12 personnel. This plan had been developed and executed in response to Board correspondence in 2000; however, limited funding impacted recent progress (see 11/10/06 and 12/1/06 site rep. reports). Based on YSO's request in late November, BWXT has re-evaluated the remaining actions from a risk-based perspective including factoring limited life for certain facilities. The BWXT proposal would eliminate a significant portion (approximately 75 percent) of the remaining scope based on either accepting the risk or pursuing an exemption. YSO is currently evaluating this proposal.