

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 2, 2005

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending September 2, 2005

A. Oxide Conversion Facility. This week, BWXT completed system testing with hydrogen fluoride (HF); however, several instrumentation problems were identified. On Monday, a level switch for the vaporizer did not function as expected. BWXT is evaluating this problem and will likely conclude that this instrument is not appropriate for an HF environment. Also during HF testing, the B-1 Wing scrubber level instruments did not function as expected (i.e., out of expected range indications) and a dock scrubber flow instrument indicated low flow. These issues are being evaluated by BWXT. In addition to resolving these instrument problems, facility personnel plan to evaluate lessons learned from initial testing prior to beginning the next phase of testing, which includes introduction of uranium to the system.

B. Building 9212 Documented Safety Analysis. In September 2004, BWXT submitted the initial version of the Documented Safety Analysis (DSA) to YSO for approval. BWXT now plans to submit the next revision of the DSA by the end of September. This submittal will incorporate YSO comments and additional building activities that were approved subsequent to the hazard analysis that was performed to support the initial DSA. BWXT plans to submit a detailed implementation plan for the safety basis by the end of November. As previously noted (see 8/12/05 site rep. report), NNSA plans to brief the Board on seismic deficiencies independent of the DSA approval. This briefing is now scheduled to occur in early-October.

C. Activity-Level Work Planning. On Monday, a Conduct of Operations Representative in the Assembly/Disassembly Building noted that a pallet of drums with hydraulic oil had been placed with the edge of two drums over a berm for a roll-up door to a nuclear material storage room. The berm is a credited design feature to prevent a large fire. The placement of the drums over the berm defeated the purpose of the berm to prevent flammable liquids from entering the room. Following inquiry by the Conduct of Operations Representative and the YSO Facility Representative, the issue was externally reported by BWXT.

The hydraulic oil (about 150 gallons) had been drained from a tensile test machine as part of dismantlement of the machine by BWXT maintenance personnel. There was lack of clear, specific identification of hydraulic oil draining into drums and drum handling as part of the defined work scope in the work planning documents used for this activity. The Unreviewed Safety Question (USQ) Determination performed for this activity only noted the presence of the berm near the machine (and its purpose in preventing the machine's hydraulic fluid from entering the storage room). The work instructions only stated that "...care must be taken to protect the dike/berm..." when removing equipment. The site reps. consider this event indicates the need for improvement in clearly defining scope of work during work planning efforts including during USQ process implementation so that all hazards can be properly addressed and controlled.

D. Independent Oversight Review at Y-12. A DOE Office of Independent Oversight and Performance Assurance team completed the main on-site portion of their biennial review of Y-12 environment, safety and health program implementation. Issues with activity-level work planning and USQ process implementation were noted by the team. A report is being drafted and a factual verification visit is planned in mid-September.