

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending October 26, 2007

A. Board Member Visit. Board member Larry Brown visited Y-12 this week to observe operations in the Enriched Uranium Operations Building. Mr. Brown and the site reps. observed startup and operation of the secondary extraction process and walked down the Oxide Conversion Facility. BWXT also discussed actions regarding a prior observation on the need for increased tracking of process system status information by production management (see the 9/14/07 site rep. report). BWXT has initiated tracking protocols for various information for major process systems (e.g., tank levels, system alignment, and pending surveillances). BWXT management and YSO personnel noted that such deliberate tracking and use of this information by production crew supervision has benefitted day-to-day operations planning and execution.

B. Highly Enriched Uranium Materials Facility. The site rep. walked down the Highly Enriched Uranium Materials Facility construction site. Concrete placements for the storage area are expected to be completed in the next few months. Installation of safety-class storage racks commenced in early-October. Quality assurance checks for the initial sets of racks by the construction contractor and BWXT will be performed and documented over the next several weeks. Safety-significant fire sprinkler piping installation also commenced in early-October. The BWXT recommendation addressing the lack of functional classification of the water supply to the fire protection system is still pending (see last week's site rep. report).

C. Y-12 Safety Basis Documents. In a letter dated February 28, 2006, the Board noted weaknesses identified during a review of a Y-12 safety basis document including the use of a different functional classification for safety controls that protect workers from chemical hazards in a nuclear facility (termed "safety-significant non-nuclear"). Last week, BWXT provided a proposal to YSO that includes phase-out of the safety-significant non-nuclear functional classification. The phase-out would be accomplished during annual updates for existing facility safety basis documents.

D. Criticality Safety. On Monday, BWXT identified a container with a loading that exceeded the applicable criticality safety mass limit in the Enriched Uranium Operations Building. Operators received guidance from criticality safety personnel to resolve the situation by splitting the contents between two containers. The container had been loaded with uranium oxide that is produced as a byproduct of casting enriched uranium chips. Although still under investigation, it appears that a recent change to the chip cleaning agent is impacting the amount and type of oxide produced such that oxide density in the container has increased. Building management has suspended the operation pending satisfactory guidance from criticality safety personnel. In addition, BWXT is evaluating the impact of the change in chip cleaning agent.

E. Integrated Safety Management System Review. The BWXT corporate team completed their review of the BWXT Y-12 Integrated Safety Management System (ISMS) this week and briefed results of the review to YSO and BWXT management. Overall, the team noted a mature and generally effective ISMS at Y-12 with many noteworthy practices. The team identified four findings including a finding that Lessons-Learned are not effectively reaching the working level.