

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 5, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending October 5, 2007

A. Bulging Drum. On Monday, the lid of a 55-gallon waste drum in the Enriched Uranium Operations Building was noted by an operator to be bulging. BWXT personnel indicated to the site reps. that the drum contains combustible wastes from a precipitation process in the Special Processing area that supported a campaign in 2004. Such wastes include contaminated wipes, mop heads, protective clothing, plastic bags, tape, etc. The wastes could have some quantity of chemicals used in the process: hydrogen peroxide, ammonium hydroxide, nitric acid, and ethylene glycol. Operations personnel believe the bulging occurred in the past few weeks.

BWXT intends to remotely vent the bulging drum (and several other non-bulging drums from the 2004 campaign) and inspect the contents in a glovebox. The BWXT safety basis screening document for this condition states that the likelihood of a flammable atmosphere in the drum is very low. While BWXT work planning for venting the drums is in progress, the Job Hazard Analysis presented to Building management on Tuesday had only Fire Department notification to address the fire hazard. In discussions with YSO management, the site reps. have questioned whether any pre-staged fire response capability should be required for this activity.

B. Warehouse Activities. In preparations for material relocation from the Warehouse to the Highly Enriched Uranium Materials Facility (HEUMF), BWXT continues to load cans into Rackable Can Storage Boxes (RCSBs). Warehouse personnel loaded 150 RCSBs (900 cans) during Fiscal Year (FY) 2007 and plan to load as many as 300 RCSBs in FY 2008. In addition, BWXT plans to begin staging drums for shipment to HEUMF during this FY. Activities to disposition legacy materials that cannot be shipped to HEUMF are also on-going. For uranium items potentially contaminated with plutonium (see the 6/1/07 site rep. report), BWXT plans to begin the second phase of the characterization activity using a temporary inert glovebox in early-Summer 2008.

C. Small Uranium Fire Update/Feedback and Improvement. The DOE Headquarters Office of Health, Safety and Security is planning a review in the near future at Y-12 of the small fire that occurred in March 2007 during machining chip handling in the Assembly/Disassembly Building (see the 4/20/07 and prior referenced site rep. reports). Last week, building management presented an update to BWXT senior management on progress with corrective actions.

One of the main factors identified by BWXT's fire investigation was the lack of procedural and hazard analysis coverage of the task to transfer the chips from an inert environment to a transport dolly container in air. The site reps. had noted that the investigation team's recommendations did not explicitly address this factor (see the 4/13/07 site rep. report). Since April, the need for procedural/hazard analysis coverage when handling nuclear material has been emphasized as part of BWXT's Conduct of Operations improvement initiative. The "Lessons Learned" document for this specific event issued in August, however, does not clearly articulate this factor. The site reps. discussed this observation with Y-12 management. In response, BWXT management intends to revise and reissue the Lessons Learned for this event, and potentially employ other mechanisms, to clearly emphasize the role of this factor in the fire with operations personnel.