

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2005

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJECT:** Activity Report for Week Ending July 8, 2005

Y-12 was on holiday routine on Monday and Tuesday. Mr Davis was out of the office Monday through Wednesday. Mr. Owen was out of the office on Thursday and Friday.

A. Oxide Conversion Facility. On Friday, BWXT declared an Unreviewed Safety Question based on the potential for a non-conservative set point for the Hydrogen Fluoride (HF) detectors that are credited in the Basis for Interim Operation (BIO). The BIO notes that the set point is based on a threshold limit value of 3 ppm using guidance from the American Conference of Governmental Industrial Hygienists (ACGIH) and the Occupational Safety and Health Administration. The ACGIH recommendation was revised earlier this year to 2 ppm. Although some Industrial Hygiene personnel were aware of the change, this information was not communicated to facility safety personnel for evaluation. BWXT is preparing a Justification for Continued Operation (JCO) and associated BIO changes that support facility operations with the current set point.

As noted last week, a flow indicator problem for the Dock 8/8A scrubber system prevented operators from draining HF from the vaporizer. BWXT has adjusted the flow indicator based on vendor recommendations to eliminate this issue. Post maintenance testing has been successfully completed; however, the erratic indications that caused the safety controller interlock were observed when HF was introduced to the system. The impact that HF has on this flow indicator will be re-evaluated once system testing resumes after YSO approval of the JCO and BIO changes that were noted above.

B. Quality Evaluation Relocation. Late last week, YSO provided a partial approval of the BWXT proposed Project Execution Plan (PEP) for relocating the quality evaluation activities (see site rep. report of June 24<sup>th</sup>). The partial approval allows BWXT to proceed with activities to physically move the inline glovebox (i.e., glovebox clean out, facility interface disconnection and critical lift activities). The YSO letter also requests that BWXT submit by mid-August and mid-December revisions to the PEP that addresses various YSO concerns on activity definition and schedule for the remainder of the project.

C. Chip Oxidation Operation - Update. As reported in late-May, a chip oxidation vessel failed during operations in the Enriched Uranium Operations building. BWXT has removed the failed vessel and plans to conduct a destructive evaluation. A replacement vessel has now been installed (similar vessel design). However, the oxygen system has been modified to provide a more accurate flow indication and thermocouples will be mounted on the vessel. BWXT has developed a test plan that involves varying the oxygen flow rate and chip loading while monitoring vessel temperature to identify the appropriate process parameters. BWXT plans to perform a readiness assessment for this activity during the week of July 18<sup>th</sup>.