

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2005

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJECT:** Activity Report for Week Ending July 22, 2005

Mr. Owen was out of the office this week.

A. Oxide Conversion Facility. On Wednesday, BWXT declared a Potential Inadequacy in the Safety Analysis (PISA) because of inadequate pressure testing for the piping system that connects to the Hydrogen Fluoride (HF) cylinder. This system was pressure tested at 100 psig, which corresponds to a system design pressure of 90 psig; however, the Justification for Continued Operations (JCO) submitted in June associated with the potential for HF cylinder pressurization identifies a 150 psig design pressure (see 6/10/05 and 6/24/05 site rep. reports). Initial compensatory actions for this PISA included maintaining the system in warm standby (i.e., no HF operations).

In late June, BWXT began HF testing and introduced HF to the vaporizer (see 7/1/05 site rep. report). However, a high level alarm was received that isolated the vaporizer shortly after operators began transferring HF. Subsequent attempts to drain the vaporizer were not successful because of a low flow indication for the dock scrubber system. Since then, a small amount of HF has been isolated in the vaporizer and residual HF remains in the transfer piping system. Corrective actions have been implemented for both the high level alarm and scrubber flow instrument. On Friday, BWXT management decided that it would be prudent to drain the HF from the vaporizer back to the HF cylinder and purge the piping system with nitrogen. BWXT noted that these actions would place the facility in a safer configuration. Operators began this activity on Friday afternoon.

BWXT is pursuing a JCO to resolve the system pressure testing issue noted above. In addition, a path forward to resolve the configuration management issue noted last week has been established.

B. Chip Oxidation Operation. This week, the BWXT Readiness Assessment (RA) team concluded their review of chip oxidation operations. The initial operations will be used to evaluate the chip oxidation vessel in accordance with the test plan (see 7/8/05 site rep. report). The RA team identified one finding and seven observations. The finding was associated with an outdated grading worksheet. A revised grading worksheet was provided to the team and this finding has now been closed. For most of the seven observations, proposed resolutions were implemented prior to completion of the RA. On Thursday, BWXT began field activities consistent with the test instruction. The first part of the procedure includes placement of the thermocouples on the chip oxidation vessel. BWXT plans to conduct the first test run with uranium chips on Monday.

C. Y-12 Welding Program. A joint BWXT/NNSA assessment team began their review of the Y-12 welding program this week. The team is expected to complete their evaluation and provide feedback to management next Thursday.