

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 27, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending April 27, 2007

Staff member William Linzau visited Y-12 to augment site representative coverage and review YSO oversight of the Highly Enriched Uranium Materials Facility (HEUMF) project.

A. Highly Enriched Uranium Materials Facility. The staff and site reps. conducted a review of YSO oversight of HEUMF construction. YSO management discussed actions taken to improve HEUMF construction oversight since late 2005 (see the 10/7/05 and 11/10/05 site rep. reports). YSO has stood up an HEUMF oversight team that includes a full-time Facility Representative, a quality assurance/construction engineer and a safety basis engineer. In addition, YSO has taken action to make outside expertise available to assist in specific reviews. The staff and site reps. inquired on accomplishment of “owner” responsibilities outlined in certain industry standards dealing with concrete structures, piping systems and fire protection. These responsibilities involve verifying testing, inspection and record keeping. YSO management noted that these responsibilities have been delegated to BWXT. The staff and site reps. observed, however, that clear mechanisms were not evident by which YSO verifies that these responsibilities are being accomplished by BWXT. YSO management indicated that action(s) to address this observation would be developed.

B. Conduct of Operations/Work Control. The BWXT operations manager for the Assembly/Disassembly Building questioned the work planning and control of an in-process electron beam welding activity that was being performed as a special effort for technology development purposes. At the subsequent critique, BWXT management determined that the activity was not adequately covered by a Job Hazard Analysis (JHA) and a pre-job brief had not been conducted. While the activity was discussed at prior Plan-of-the-Day meetings, the activity was only covered in the Plan-of-the-Day document as “Floor Operations.” On Friday, the site reps. discussed the work control and conduct of operations aspects of these technology development activities with BWXT management. BWXT management noted that while this type of work may not require a specific procedure and be performed as skill-of-the-craft, Y-12 work control requirements call for an appropriate JHA and mandate that hazards/controls be clearly briefed to operators. BWXT investigation and development of corrective actions is in-progress.

C. Oxide Conversion Facility. On Thursday, BWXT declared a Potential Inadequacy in the Safety Analysis (PISA) based on operability concerns for safety-related tank level switches associated with the dock scrubber. These switches activate an interlock to close isolation valves for the hydrogen fluoride system if scrubber tank level drops below a certain value. The safety basis requires a quarterly functional test to ensure that these switches activate at the proper tank level. Previously, this surveillance was performed with the scrubber shut-down (i.e., no recirculation of liquid through the scrubber); however, the surveillance procedure was recently changed to perform the test with the scrubber operating. On Thursday, a level switch failed this revised surveillance and questions arose with regard to system operability. BWXT engineering personnel are planning further testing of these switches to help resolve this PISA.