

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 25, 2006

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending August 25, 2006

Mr. Davis was out of the office all week.

A. NNSA Review of Y-12. A team from the NNSA Office of the Chief of Defense Nuclear Safety completed their review of Y-12 safety management during the past two weeks. In discussing results with Y-12 management, the team leader noted that overall safety management has improved at Y-12 during the past several years, including particular strengths in nuclear safety basis development and implementation validation processes, facility startup/restart programs, and fire protection. The team leader noted, however, that YSO and BWXT management focus is needed in conduct of operations, maintenance and issues management.

B. Control of Maintenance/Conduct of Operations. As reported on July 21st, operators in the Enriched Uranium Operations Building performed a furnace reduction activity with nuclear material without shift manager knowledge or approval and without performing appropriate post-maintenance equipment surveillance on safety-related furnace interlocks. Initial review of the event revealed deficiencies with control of maintenance and conduct of operations that were under evaluation by BWXT.

This week, the site rep. inquired on progress in evaluating this event. BWXT production organization management noted that the system engineer for the reduction furnace had not defined post-work test requirements in detail as required by the Y-12 work control manual. Only a functional check of the furnace (not the interlocks) was specified as part of work planning. The maintenance work planner also did not ensure appropriate post-work test details had been obtained from the system engineer. Work planning did not involve facility operations personnel. A "Return to Service Checklist" process was not properly followed after the repair, as required by the Y-12 conduct of operations manual. Other deficiencies in supervision and in communications and interface across involved organizations (maintenance, production, facility operations and engineering) have been identified. BWXT production organization management noted that additional evaluation is required before an integrated set of corrective actions can be identified.

C. Feedback and Improvement. As reported on August 11th, YSO had inquired on a possible safety basis violation concerning minimum staffing for the Oxide Conversion Facility after personnel evacuated the area for a radiological alarm (the alarm resulted from unauthorized removal of material from the feed glovebox). Discussion between YSO and BWXT personnel on whether a safety basis violation had occurred continued until late last week when a decision was made by senior BWXT management. A safety basis violation was then declared and externally reported as an occurrence this week. Such extended delay in declaring an occurrence had also occurred in June on a Potential Inadequacy in the Safety Analysis with respect to criticality safety of a vacuum producer (see the 6/9/06 site rep. report). The site rep. has inquired with YSO management on cause(s) and corrective actions to avoid such delays in the future.

D. Emergency Management Exercise. On Wednesday, the site rep. observed an exercise simulating a nuclear criticality event involving enriched uranium metal in the Warehouse. Control of (simulated) injured and evacuating personnel as well as other site-wide protective actions appeared satisfactory.