

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 18, 2008

TO: J. Kent Fortenberry, Technical Director  
FROM: R. Todd Davis/David Kupferer/Donald Owen, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending April 18, 2008

Staff members D. Gutowski, C. Roscetti, and J. Shackelford were at Y-12 to assess safety system design, functionality, and maintenance. Staff member D. Winters and outside expert D. Boyd were at the Transuranic Waste Processing Center to observe the readiness review for startup of remote-handled transuranic waste processing.

**Safety Basis Analyses:** On Wednesday, Y-12 personnel briefed the staff on progress made to address the use of potentially non-conservative Airborne Release Fraction (ARF) values for uranium metal as identified in a Board letter dated January 17, 2008. B&W plans to revise accident analyses as necessary (i.e., if control categorization would change) to incorporate bounding ARF values and will apply conservative Damage Ratio parameters to account for the fact that not all the metal would oxidize during a design basis fire.

**Transuranic Waste Processing Center:** The DOE Operational Readiness Review (ORR) for startup of remote-handled (RH) transuranic waste processing in the new hot-cell continued this week. Various portions of demonstrations were not satisfactorily completed due to equipment problems. For example, the contamination control sleeve between the cask and the hot-cell portal pressurized during demonstrations because the interface was not adequately designed for venting. The ORR team and DOE-ORO management indicated that no integrated demonstration of full RH operations has been performed to date. As a result, the ORR team suspended the ORR until the contractor can adequately demonstrate RH operations. The site reps. note that prerequisites in the contractor ORR Plan-of-Action do not specifically call for an integrated demonstration of full RH operations.

**System Configuration Control:** During a walk-down of the intermediate evaporator system a few weeks ago (see the 3/7/08 site rep. report), the site reps. observed locks that were being used to maintain the position of valves. The subject locks did not have identifying tags. The site reps. inquired with YSO on the requirements for such locks. In response to the site rep. inquiry, YSO formally assessed B&W's control of administrative locks including the use of tags in the facility. YSO determined that administrative locks are not required to be tagged by B&W procedures—even if the valve is serving a safety function—except for deficient equipment where operation may cause system damage. However, YSO did find that some B&W requirements regarding administrative locking using control devices in the B&W Conduct of Operations manual were not being met. For example, YSO found that control device checklists are not being maintained and annual reviews of controlled components are not being conducted. B&W does track the locks on system alignment checklists.

**Assembly Operations:** During a routine operation in the Assembly/Disassembly Building, vacuum supply was lost to a vacuum fixture that was being used to lower a part. The part fell approximately seven inches onto an inspection stand causing minor damage to the part. Neither the visible nor audible loss-of-vacuum alarms activated during this event. Operators stopped work and made the appropriate notifications. After supervisors determined that there were no criticality safety issues and the vacuum system was checked to be working correctly, operators used the same vacuum fixture to move the subject unit to an alternate work stand. During the critique, B&W noted that this is the third event during the past few years in which vacuum was lost and a part was dropped. B&W has suspended lifting operations utilizing vacuum fixtures while an assessment is performed to determine the cause of the recurrent vacuum problems.