

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 24, 2004

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJ: Activity Report for Week Ending September 24, 2004

A. Uranium-233 Disposition at ORNL. On Tuesday, UT-Battelle presented the results of their preliminary design review (i.e., 60% design) of the Isotek Uranium-233 Disposition and Medical Isotope Production Program. The team concluded that the design proposed will accomplish the project mission and that the system appears to be compatible with existing Building 3019 constraints. Five major issues were identified: inadequate identification of design requirements for safety systems; lack of ventilation design detail; inadequate integrated test program and startup plan; lack of planning for some of the Uranium-233 material configurations; and inadequate waste minimization. Isotek continues to develop the cost estimate based on the 60% design package and expects to complete this activity early in October. In addition, the preliminary DSA should be submitted to DOE later this month.

B. Authorization Basis Implementation - Independent Validation. As reported on August 20th, BWXT conducted an Implementation Validation Review (IVR) of Authorization Basis controls in the assembly/disassembly facility. This was the first such IVR for a Hazard Category 2 facility since identifying this action to the Board in July 2003. Facility management addressed the findings and declared the Documented Safety Analysis (DSA) implemented in early September. This week, YSO began their IVR for the assembly/disassembly facility and BWXT started their IVR for the enriched uranium machining facility. These reviews are to be completed during the week of September 27th.

C. Y-12 Uranium Storage. Last Thursday, BWXT identified three cans in the Warehouse that were stored below the PC-2 flood level and, therefore, not in compliance with the facility safety analysis report. The cans were moved the following day to meet the safety basis requirement. BWXT evaluation of other containers stored in this facility identified several other cans that potentially did not meet this requirement. These cans were moved earlier this week. Current facility procedures appear to adequately implement the safety basis requirement. BWXT continues to investigate how these cans were improperly stored.

During evaluation of this issue, BWXT criticality engineering noted that this specific storage requirement was based on an older criticality safety evaluation and a more recent evaluation did not require this storage limitation. However, the safety analysis report has not been revised to be consistent with the latest analysis. BWXT is also evaluating potential process improvements to ensure safety basis documents are consistent.

D. Skull Oxide Calciner Deactivation. Earlier this month, BWXT resumed the Readiness Assessment (RA) for deactivation of the Skull Oxide Calciner (site rep. weekly 8/13/04). The RA team issued their final report this week that included eight findings. Corrective actions for these findings have been completed by the facility and the associated closure packages were approved by the RA team leader. Based on the closure of the RA findings, the startup authority (the BWXT Division Manager for Projects) approved beginning deactivation activities for the Skull Oxide Calciner. The initial activity, scheduled for next week, will be the removal of an existing fan and installation of portable HEPA ventilation to support contamination control during deactivation activities.