

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 24, 2005

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJECT:** Activity Report for Week Ending June 24, 2005

A. Oxide Conversion Facility. As reported on June 10<sup>th</sup>, in response to the potential for Hydrogen Fluoride (HF) cylinder pressurization from hydrogen based on an HF reaction with iron in the cylinder, BWXT had developed a revised Justification for Continued Operation (JCO). Following initial efforts to implement the JCO controls, a second revision to the JCO was submitted by BWXT and approved by YSO this week. This revision identifies additional controls to close a cylinder valve if main system isolation valves have functioned during operations to minimize any hydrogen leakage to the Dock 8/8A scrubber. BWXT will be performing an Implementation Validation Review to confirm the JCO controls are properly implemented.

B. Building 9212 B-1 Wing Fire Protection. Per NNSA Headquarters letter of July 6, 2004 to the Board, Y-12 was to complete fire protection upgrades to B-1 Wing by September 2005. The upgrades include installation of sprinklers on the first floor, a new system shutdown interlock, fire protective coatings on column supports, and changes to divert combustible liquids to the first floor. The site rep. performed a walkdown of the upgrades this week. Major remaining work includes tie-in of the new sprinklers to water supply piping and system pressure testing.

C. Melton Valley Transuranic Waste Processing. Foster-Wheeler continues readiness preparations for processing contact-handled transuranic waste. DOE approved the Documented Safety Analysis (DSA) this week. The contractor Operational Readiness Review is currently anticipated to be started by mid-July. This week, the site rep. reviewed implementation of certain Specific Administrative Controls (SACs) in the DSA. In particular, two of the SACs are associated with ensuring the facility does not exceed nuclear material inventory limits. The procedure associated with these controls relies on a database software system with manual operator updates to maintain specific area inventories. It was not clear that adequate quality assurance provisions are in place to reliably implement the inventory SACs (e.g., there may be a need for a periodic surveillance or operator log keeping). This observation was discussed with Foster-Wheeler and DOE-ORO personnel.

D. Uranium-233 Disposition at ORNL. This week, the DOE-ORO design review team presented the results of the 90% Design Review for the Uranium-233 Disposition and Medical Isotope Production Program in Building 3019. The team concluded that Isotek's design was generally satisfactory but noted three main issues involving interface of the new project ventilation systems with existing Building 3019 systems, adequacy of shielding calculations, and identification of safety related equipment on drawings. In addition, 32 other comments were provided on the design package. The team's report is expected to be issued to Isotek for action next week.

E. Quality Evaluation Relocation. YSO continues to evaluate the Project Execution Plan for this project (see 6/3/05 site rep. report) and now anticipates a partial approval next week to allow preparations to begin to move the first glovebox from the Quality Evaluation building. Due to the length of the glovebox and the size of the removal hatch, a critical lift will be required and the glovebox will need to be vertically tilted 45 degrees to pass through the hatch. Earlier this month, BWXT successfully completed a test lift of a full-size glovebox mock-up (made of wood) to assist with planning this critical lift.