

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 13, 2003

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Donald Owen, Oak Ridge Site Representative  
**SUBJ:** Activity Report for Week Ending September 12, 2003

A. Y-12 Conduct of Operations. As reported on August 22<sup>nd</sup> and July 25<sup>th</sup>, YSO provided ratings of unsatisfactory for Conduct of Operations for BWXT for the months of July and June, respectively. This week, BWXT issued a "Conduct of Operations Improvement Plan" to YSO. The plan identifies actions being taken site-wide and by each of the major operating divisions at Y-12. This plan is being provided to the staff for review. (1-C)

B. Y-12 Building 9204-4 Storage of Machine Chips - Update. As reported last week, during a tour of Building 9204-4 by Board Members, staff and site rep. in late July, an inquiry had been made on the procedures and protocols for storage of depleted machine chips. In followup, Building 9204-4 personnel determined that several drums containing machine chips were not vented. The chips are being stored as there is no current disposition path for the chips due to a processing concern. This week, BWXT identified a positive Unreviewed Safety Question Determination (USQD) associated with storage of the chips in unvented containers. The USQD notes that neither the current nor pending authorization basis documents for Building 9204-4 address a postulated hydrogen buildup scenario. Forwarded with the USQD is a Justification For Continued Operation (JCO) noting the hazards of chips storage but indicating that the drum lids are likely not air tight and the drum lid would likely dislodge at a relatively low pressure. The JCO identifies compensatory measures that include restrictions on personnel entering the storage area and weekly visual inspections of the drums for any indications of pressurization. Fact-finding and development of near term actions to address the drums are still in progress. (1-C)

C. Y-12 Building 9720-5 Authorization Basis Violation. On August 19<sup>th</sup>, a YSO Facility Representative determined that minimum staffing had not been met during a fissile material handling activity in Building 9720-5 (Warehouse) on August 17<sup>th</sup>. The Warehouse Technical Safety Requirements (TSR) require one shift manager, one shift supervisor, one material controller and two material clerks for fissile material handling activities. One individual served as both the shift manager and the shift supervisor and only one material clerk who was fully certified for Warehouse operations was present (other material clerks present were not yet certified for the Warehouse). After consulting other YSO staff, the FR communicated her position that this was a TSR violation to Warehouse management on August 21<sup>st</sup>; they disagreed. This issue then proceeded to be debated for 2 ½ weeks at higher levels of management between YSO and BWXT without reporting the TSR violation nor conducting a formal fact-finding session to investigate/resolve the issue. Following discussion between the YSO Manager and the BWXT General Manager, BWXT reported this as a TSR violation and conducted fact-finding on Monday. Corrective actions are in development. (1-C)

D. Y-12 Building 9212 Microwave Casting. Preparations have been in progress for startup of a prototype microwave caster in E-Wing using copper as surrogate material. This prototype will be used to test, develop procedures and train personnel prior to future utilization with enriched uranium. This week, YSO issued their Safety Evaluation Report (SER) for this effort with surrogate material. The SER notes the Hazard Evaluation Study performed for this work that identifies credible over-pressurization scenarios due to heating of moisture in insulation. Controls include a pressure relief valve, set at 5 psig, and administrative controls to minimize any moisture in the caster. The YSO SER also requires pressure monitoring and power adjustments during the operation to avoid challenging the relief valve set point. Startup is expected early the week of September 15<sup>th</sup>. (2-A)