DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 17, 2004

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJ: Activity Report for Week Ending December 17, 2004

Staff members Linzau and Nichols and outside expert Rizzo were at Y-12 this week to review the Highly Enriched Uranium Manufacturing Facility (HEUMF) excavation and concrete placement activities. Staff member Winters visited Melton Valley/ORNL to review waste processing.

A. Highly Enriched Uranium Manufacturing Facility. The BWXT excavation and construction subcontractor has completed the majority of excavation activities at the HEUMF construction site. On Thursday, the staff and site reps. observed initial placement of a mud mat, which is a thin layer of concrete to protect the newly exposed rock surface. Completion of the mud mat is expected to occur in January followed by concrete placement to form the facility foundation.

B. Oxide Conversion Facility. This week, BWXT completed their contractor Operational Readiness Review (ORR) for the startup of the Oxide Conversion Facility. The ORR team concluded that upon resolution of seven pre-start findings, BWXT will achieve readiness to conduct facility operations with enriched uranium. Pre-start findings included issues with the scheduling and performance of preventive maintenance, implementation of startup testing for safety-related systems, and documentation of adequate corrective actions for issues noted during a previous site-wide drill (see 12/3/04 report). The team also identified a pre-start finding for training on the facility startup procedures (see 11/19/04 report). One post-start finding was identified based on rainwater infiltration into the facility. BWXT is developing and implementing corrective actions for these findings. The NNSA ORR is scheduled to begin on January 24th.

C. Melton Valley Waste Processing Facility. In October, Foster Wheeler completed processing the waste solution supernate (approximately 1620 m^3). The solidified, low-level waste has been shipped to the Nevada Test Site for disposal. Foster Wheeler is currently flushing the vessels and lines with nitric acid to remove residual contamination. This portion of the facility will be placed in a stand-by mode and will not be used again until sludge processing, which is expected to begin in 2007. Contact handled transuranic waste is the next waste stream that will be processed by this facility. A small sorting building that will be adjacent to the waste processing facility is currently under construction. The DOE Operational Readiness Review is currently scheduled for July 2005 with startup in August. This campaign will focus on the lower dose rate containers (approximately 850 m^3). Higher dose rate containers and remote handled transuranic waste will be processed through a hot cell in this facility starting in late-2006.

D. Fasteners in Tooling, Safety Systems and Design Features. Responding to a recent event at the Pantex Plant with un-torqued fasteners in special tooling for a nuclear explosive operation, BWXT Y-12 started an initiative to assess the practices for torquing fasteners in various tooling, safety systems and credited design features in nuclear facilities at Y-12. This Y-12 initiative includes inspection of tools and equipment to determine the presence of any loose fasteners followed by engineering assessments to determine need for specific fastener torque levels with followup inspections based on the results of the assessments. BWXT management noted to the site reps. that they will continue to follow the broader Pantex tooling program issues including the NNSA response to the Board's December 15th letter for any additional applicability to Y-12.