DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 10, 2002

TO: J. Kent Fortenberry, Technical Director
FROM: Matt Forsbacka, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending May 10, 2002

Staff member W. Andrews was on site this week to review the storage of legacy materials and to receive a status update on the Highly Enriched Uranium Materials Facility (HEUMF).

A. BWXT Y-12 Lifting Fixture Safety: BWXT Y-12 personnel briefed the site representative on a proposed fixture evaluation project to review designed safety features and installed use of below-the-hook lifting fixtures for a broad class of tooling applications in Building 9204-2E, Assembly and Disassembly, and Building 9515, Rolling and Forming. The program will eventually migrate to all Y-12 facilities that use lifting fixtures. Budget and schedule for this important work is now in development. This laudable initiative should be considered for wider implementation across the spectrum of tooling and equipment used at Y-12. (2-A)

B. BWXT Y-12 Readiness Assessments: The Contractor Readiness Assessment (CRA) for the restart of the Californium Shuffler in Building 9720-5, Enriched Uranium Warehouse, was completed this week. Of the 15 findings CRA findings, 9 are classified as pre-start. Of note:

1. Safety Basis requirements do not adequately flow down to implementing procedures and documents. A Technical Safety Requirement (TSR) surveillance requirement was found to be less restrictive that the requirements in the Safety Analysis Report (SAR) or TSR bases.
2. Abnormal Operating Procedures (AOPs) were found to have potential for endangering personnel safety and health in off-normal situations. AOPs are intended to mitigate the effects of off-normal events in order to prevent plant damage, and there are instances were personnel safety could be compromised during the execution of AOPs for certain scenarios.
3. A neutron monitor used to support Californium Shuffler operations was not under configuration control, nor did it have a structures, systems, and components grade assigned.

The NNSA/YAO Readiness Assessment is expected to start May 20.

The CRA for Phase I Disassembly operations commenced this week. Evolutions observed by the site representative went very smoothly and the assemblymen demonstrated thorough process knowledge. This CRA is expected to be complete next week. (2-A)

C. BWXT Y-12 HEUMF Status: Critical Decision 1 is still pending NNSA approval. The facility concept has been down-scoped in an effort to reduce the overall cost of the facility. Of note is the elimination of the surge area, resulting in a nearly 30% footprint reduction and a reduced need for soil backfill. The staff also examined a prototype Rackable Can Storage Box (RCSB) that is under consideration as the fundamental storage unit for the HEUMF. The RCSB has six storage locations within a borated ceramic fill. The presence of the isotope boron-10 is a key feature to ensuring nuclear criticality safety, and quality assurance of the manufacture of the fill material will be of paramount importance. Additionally, the staff suggested limiting the forms of material stored in the HEUMF to metals and oxides and requiring the use of certified storage cans. Firm criteria set at this early stage will benefit both operations and safety. (1-C)

cc: Board Members