

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 9, 2002

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Tim Hunt, Oak Ridge Acting Site Representative  
**SUBJ:** Activity Report for Week Ending August 9, 2002

A. BWXT Y-12 Enriched Uranium Operations (EUO) Fire Protection: An NNSA review team recently completed a comparison of options to improve fire safety in B-1 Wing of Building 9212. The chosen upgrades were required to control significant fires, not interrupt program work, and be constructible in B-1 Wing within 10 years. The most heavily weighted evaluation criterion was reduction in risk, followed by life cycle cost and reliability. The recommended fire protection option was near term upgrades to egresses and installation of annunciation and detection equipment, in addition to subsequent establishment of full sprinkler coverage. (2-A)

B. BWXT Y-12 EUO Reduction Vessel: The first of six planned test runs produced a good quality metal button on Monday. The next test run will be in 2-3 weeks. As noted in last week's report, operators failed to follow a posting by placing a hot reactor vessel in the east end of the storage rack. The posting which identified the hot vessel storage area was affixed by a Fire Protection engineer near the air intake plenum at the west end of the rack because it was considered desirable to have the vessels cool down as quickly as practical for worker comfort. The posting has been removed due to the lack of a sound technical or safety basis. (2-A)

C. BWXT Y-12 EUO Wet Chemistry: Draining of fissile/organic solutions from the primary extraction columns in the B-1 Wing of Building 9212 was completed this week. NNSA had stipulated that the columns be drained prior to restart of wet chemistry operations to reduce the risk and potential consequences of a fire. There is no sprinkler coverage in this area of B-1 Wing. Only one of the four primary extraction banks and neither of the secondary extraction banks will be operated during restart. To date, only one of the two secondary extraction system banks has been drained. Plans are to drain the other system after the wet chemistry operational readiness review. It is expected to be a more complex draining operation due to the higher concentration of uranium in the columns, requiring additional controls. (2-A)

D. BJC Integrated Safety Management System (ISMS) External Review: An independent external evaluation team recently completed a review of the Bechtel Jacobs Company (BJC) ISMS. The evaluation was a key component of the BJC corrective action plan developed to address concerns identified in the Board letter of October 15, 2001. Several concerns with the ISMS Description and implementation were noted that need resolution before proceeding with the DOE ISMS re-verification. Among the conditions that must be achieved at BJC operations conducted at the Oak Ridge National Laboratory and Y-12 Site prior to re-verification are: a process to measure system effectiveness, maturation of the nuclear training and qualification program, an upgraded feedback and improvement process, clearer definition of roles and responsibilities, improved formality of operations and work planning, and a process to ensure standards sets are maintained current and accurate. Contingent on adequate closure of these and preexisting open corrective actions, the DOE ISMS re-verification is expected to begin late this year. (1-C)