

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 26 , 2002

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Matt Forsbacka, Oak Ridge Site Representative  
**SUBJ:** Activity Report for Week Ending July 26, 2002

Staff members D. Burnfield and J. DeLoach and Outside Expert D. Volgeneau were on site this week to review the status DNFSB Recommendation 2000-2 related activities. Staff member T. Hunt was on site to augment the Site Representative.

A. Oak Ridge National Laboratory (ORNL) Radiological Contamination Event: The preliminary source term estimate of the Strontium-90 (<sup>90</sup>Sr) release was determined to be 1.5 mCi of <sup>90</sup>Sr. This correlates to a dose of 0.8 - 1.0 mrem to the maximally exposed individual. This source term estimate is based on data from the Stack 3039 monitoring system and is considered to be the upper bounding value. Additional calculations are being performed to refine this estimate. A detailed analysis of the HEPA filter media from Building 3038 is planned; however, difficulties with logistics is delaying this work. This analysis will support the causal analysis of events leading to this release of radioactive contaminants. (1-C)

B. BWXT Y-12 Enriched Uranium Operations (EUO) Wet Chemistry Restart: On Friday, the Performance Self Assessment (PSA) concluded. Favorable comments on operator proficiency and adherence to conduct of operations principles were noted by the PSA team. Finalized pre- and post-start findings will be presented in the PSA final report next week. Among the significant issues noted by the PSA in their exit briefing were the completeness of equipment functional verifications, the implementation of the B-1 Wing fire protection program, and procedure inadequacies and equipment deficiencies for the Wiped Film Evaporator and Denitrator systems. It appears that the BWXT Y-12 Operational Readiness Review will be delayed.

On Thursday, YSO issued a Safety Evaluation Report (SER) for Revision 15 of the Building 9212 Basis for Interim Operation (BIO). This BIO revision incorporates new airborne release fraction information. Conditions of approval related to B-1 Wing fire protection issues include:

1. Wet Chemistry operations will be limited to a period of less than one year following NNSA startup approval. This condition of approval is intended to expedite a final decision regarding B-1 Wing fire suppression strategies.
2. BWXT Y-12 must revise the Fire Hazards Analysis and ensure consistency with the BIO.

Also related to Wet Chemistry restart is a condition of approval that requires the segregation of safe bottles to reduce the unmitigated consequences of fire events in C-1 and D Wings. (2-A)

C. BWXT Y-12 Enriched Uranium Reduction Vessel: On Tuesday, the Site Representative observed the testing of the induction furnace set-points that limit the external heating of the reduction vessel. During this evolution workers discovered an error in the procedure and appropriately halted work. Preparatory activities were further hampered by calibration problems with a pressure gauge and an infrared pyrometer. The Site Representative will observe reduction vessel operations planned for next week. (2-A)

cc: Board Members