DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2002

TO: J. Kent Fortenberry, Technical Director
FROM: Matt Forsbacka, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending May 31, 2002

A. BWXT Y-12 Building 9204-4 (Beta-4) : Recently, the site representative and a member of the Board's staff conducted a comprehensive walkdown of Beta-4. Significant quantities of unnecessary combustibles were found to be stored throughout this facility. This practice contradicts the administrative control of combustible materials credited in the Operational Safety Requirements document. Last week, the facility manager took action in his areas of direct control and deployed 5 Safety Focus teams to find and remove excess combustible materials. In a short time, the teams made notable progress:

1. Approximately 625 ft^3 of loose combustible materials were removed from the facility.
2. Excess combustible materials blocking access panels and equipment were cleared away.
3. Pallets and other necessary materials were rearranged to provide appropriate separation from load bearing columns.

The facility manager shows a high degree of commitment to continuous improvement in this area, but much work remains to be done in rooms controlled by tenant organizations. (1-C)

B. BWXT Y-12 Enriched Uranium Operations (EUO): Last week, BWXT personnel conducted a series of heat of combustion and flame propagation tests of organic solutions, used in B-1 Wing, at the Western Fire Center, Inc. in Kelso, WA. These tests were in response to YAO's Safety Evaluation Report of the revised Building 9212 Basis for Interim Operations (BIO). The tests were conducted in open burn pans under controlled conditions for pure, water saturated, and nitric acid (30% concentration) saturated solutions. Visual observations of the tests gave indication of solution boiling when the fires became fully developed. This has given further cause to re-evaluate the airborne release fraction (ARF) cited in the BIO. It is likely that the ARF will be revised to indicate a larger release fraction. While the Unreviewed Safety Question Determination is being resolved, primary and secondary extraction loop testing has been suspended. A Justification for Continued Operations will be necessary to make substantive progress in Wet Chemistry Restart activities. (2-A)

C. Y-12 Readiness Assessments (RAs): This week YAO completed its RA of Phase I Disassembly activities in Building 9204-2E, Assembly and Disassembly. The YAO RA team noted 3 pre-start findings and 1 post-start finding, and BWXT personnel took prompt corrective action to satisfy their issues. Among the corrective actions were to:

1. Modify a lifting fixture to allow for sufficient shackle clearance and minimize the possibility of misalignment during a lifting operation.
2. Calibrate Argon Station's pressure regulator gauges. This system provides a fire prevention function during cutting operations, and the flow meter had been calibrated to ensure sufficient gas flow. Historically, pressure gauges on bottled gas have not been calibrated after being put into service, but in this case the safety function of the system calls for additional rigor.

The RA team concluded that the Phase I Disassembly operation can be safely conducted. (2-A)

cc: Board Members