DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 29, 2003

TO: J. Kent Fortenberry, Technical Director
FROM: Donald Owen, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending August 29, 2003

A. Y-12 Conduct of Operations/Work Planning. On Thursday, a hazard to personnel in Building 9212 was created when steel plates (about 36 square inch by 1/4 inch thick) fell out of the overhead in a normally occupied area. The plates fell as a result of a subcontractor work crew performing outside roofing work cutting four bolts that were protruding from the roof and that held the steel plates in place. Fact-finding by BWXT revealed that the bolts were not annotated for removal on the drawing governing the roofing work. Rather than pursue a drawing change through the formal Field Change Notice process as required, the subcontractor verbally requested and received verbal permission to cut the protruding bolts from a BWXT manager in the Building 9212 operations group. Fact-finding also revealed that the roofing activity Job Hazard Analysis, while addressing safety controls for workers on the roof, did not address the need for exclusion or other precautions in the areas under that part of the roof and no such control was in place. Corrective actions are in development. (1-C)

B. Y-12 Near Misses - Update. The following is an update on investigation and corrective actions to be taken for three near miss occurrences discussed in the August 22nd site rep. report:

- Fact-finding continues on the Building 9202 event of overheating of an electrical feeder bar to a furnace and a fire department responder cutting into the electrical duct with a metal tool. It is suspected that cooling water was inadvertently cut to a portion of the feeder bar, but exact configuration of the system is still being determined. Regarding the lack of labeling of the electrical duct (thought by response personnel to have been a ventilation duct), a site-wide "lessons-learned" has been distributed recommending that electrical ducts and chases and other process hazards be assessed for adequate labeling, particularly considering the needs for emergency responders.

- Fact-finding continues on the "alligator shear" event in Building 9212 where a serious hand injury was narrowly avoided when the shear unexpected deployed without the operator engaging the hand and foot safety switches (an unexpected second cut following an intended first cut). It was determined that most personnel performing these shear operations were aware of the deficient condition, except for the operator and supervisor on this event. It is still being determined, however, what specific actions were taken in response to the numerous observations of this condition during the past several years. As a corrective action, the BWXT General Manager requested that all operations personnel review and identify equipment/facilities with deficient conditions or concerns, with particular emphasis on safety features.

- Fact-finding is complete on the Building 9720-5 (Warehouse) event where a security guard was nearly pinned against the loading dock when the on-site nuclear material transfer vehicle began backing from a few feet away. The guard indicated he did not hear a backing signal. Based on testing of the vehicle, the backing signal is considered audible though somewhat lower in audibility than recommended by a national industrial safety group (about 11 decibels above background verses 15 decibels). The main corrective action is to revise the on-site transfer procedure to require the security guard and driver to jointly clear the back of the vehicle before final backing of the vehicle to the loading dock. (1-C)