

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 16, 2007

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJECT:** Activity Report for Week Ending March 16, 2007

A. Small Uranium Fire. On Thursday morning, a small uranium fire occurred in the Assembly/Disassembly Building associated with a uranium chip handling task for the Quality Evaluation (QE) operation. The fire occurred while personnel were transferring uranium chips in a can from the QE glovebox into a chip transport dolly external to the glovebox. Contrary to initial reports, the fire was not extinguished with coke by Y-12 personnel but rather the burning chips self-extinguished after a short time. Facility personnel immediately contacted the fire department and an evacuation of the building was completed. No personnel injuries or contaminations were identified following the evacuation; however, bioassay samples will be collected and analyzed for all potentially affected personnel. Fire department personnel responded and confirmed that the fire was extinguished and that the facility was in a safe condition. The Y-12 Emergency Response Organization was mobilized and an Operational Emergency was declared. The site reps. monitored emergency response activities at the Y-12 Technical Support Center and Incident Command. Site survey team evaluation of areas around the Assembly/Disassembly Building did not identify any external release of material.

On Thursday afternoon, a re-entry plan was developed. The re-entry team conducted radiological surveys and verified that the scene was in a safe condition. The most significant contamination appears to be localized near the QE glovebox. A recovery plan was subsequently developed and the Operational Emergency was terminated.

On Friday, BWXT made facility entries consistent with the recovery plan to assess radiological conditions and perform limited decontamination to establish a boundary at the scene. BWXT has assigned an investigation team to review this event. In the interim, similar chip handling activities have been suspended pending evaluation. In addition, BWXT is evaluating all site operations involving uranium chips to determine if additional actions are necessary.

B. Conduct of Operations. At the request of YSO, BWXT provided an update briefing on progress under the site-wide Conduct of Operations improvement initiative (see the 12/15/06 and 2/23/07 site rep. reports). Training and revised procedures to improve pre-job briefings has been completed. A video presentation by senior management on conservative decision making has been completed and is to be presented during seminars to individual work groups. Improvements to the conduct of critiques following operational events are being determined. Not evident during the update briefing and in the actions to date, however, was an emphasis on proper adherence to procedures as generally discussed in the action plan for the initiative. The site reps. discussed this observation with YSO and BWXT management.

C. Emergency Management Exercise. On Wednesday, the site rep. observed an exercise focusing on command/control of a simulated fire involving enriched uranium in the Assembly/Disassembly Building. Protective actions appeared satisfactory though some improvement actions (including any from the chip fire event noted above) are anticipated.