

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 1, 2016

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending April 1, 2016

Staff members E. Gibson and R. Jackson were in Oak Ridge to observe a peer review of flood hazards associated with the design of the Uranium Processing Facility.

**Y-12 Excess Facilities:** Last week, the site reps met with OREM personnel to discuss upcoming work on excess facilities at Y-12 and ORNL this year. OREM received a \$28 million budget increase this year for risk reduction activities on excess facilities. Some of these funds will be directed to UCOR to commence hazard identification and characterization of legacy equipment on the exterior of Building 9201-4. UCOR will also start characterization of the eight remaining buildings in the Biology Complex in preparation for demolition once a critical decision package is completed. Future demolition of larger excess facilities such as Buildings 9201-5, 9201-4, and 9204-4 is dependent on construction of the Outfall 200 Mercury Treatment Facility on the Y-12 site and the opening of the new on-site CERCLA landfill in the early 2020s. This timing roughly aligns with completion of cleanup activities at the East Tennessee Technology Park, which has a large workforce skilled in this type of decontamination and demolition work.

**Work Planning and Control (WP&C):** The CNS Y-12 Infrastructure organization is initiating a pilot program for a proposed new chapter in the site's integrated work control manual designed to reduce the number of hours required to plan for corrective maintenance (CM) work packages on mission critical equipment. The pilot program is being conducted at Building 9225-03 and the revised WP&C process is being directed through a standing order. The standing order streamlines the WP&C process by eliminating certain administrative steps and precluding planners from having to develop new job hazard analyses (JHAs) for each CM activity. Instead, the standing order promotes the use of previously-developed JHAs for similar work as a starting point to develop task-specific hazard controls that will go directly into the work package. The standing order then directs the responsible planner to convene a Hazard Review Team representing various safety disciplines to review and approve the work package. The new process also gives the planner discretion to determine what job site walkdowns are required.

**Highly Enriched Uranium Materials Facility (HEUMF):** Several weeks ago, Power Operations (PO) personnel initiated a switching order to place the HEUMF switchgear offline in support of a planned preventive maintenance (PM) activity. One step in the switching order involved a complex evolution to transfer the load powering half of the facility from the switchgear undergoing maintenance to another source. The intent of this action was to isolate power to the switchgear without losing primary power to any portion of the facility or its safety systems. The HEUMF Shift Manager, recognizing the potential for power loss due to the complexity of this evolution, made the conservative decision prior to the PM to develop an outage plan and enter the limiting conditions of operation for safety systems affected by a loss of power event. PO personnel attempted the complex evolution to transfer the load three separate times and each time a portion of the facility lost power. The Shift Manager was present for each evolution and gave permission to re-attempt the switching order after power to the facility was restored. While PO personnel were attempting to restore power following the third attempt, the system unexpectedly aligned to the configuration desired for the PM. At this point, PO personnel, with Shift Manager approval, executed the PM. In the fact-finding meeting held shortly after the event, CNS engineering identified actions to evaluate why the system responded in this manner. This week, CNS management held a critique and identified an opportunity to clarify which situations warrant consideration for work pauses during PO activities.