

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 29, 2016

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending February 26, 2016

**Uranium Processing Facility (UPF):** The United States Army Corps of Engineers (USACE) is managing a subproject for NNSA to ready the UPF site for start of facility construction. These preparatory activities include the installation of a 48-inch storm drain line. In late January, the USACE's excavation contractor inadvertently demolished an in-service 36-inch storm drain during the installation of the new storm drain on the construction job site. In early February, USACE informed Bechtel National, Incorporated (BNI), CNS, and the UPF Project Office (UPO) of the error. UPO has a field representative to ensure configuration control of Y-12 systems is maintained, but it took several days for the error to be recognized and several more days for the USACE to inform CNS and UPO. Work was suspended as efforts commenced to restore construction site drainage. Late last week, field personnel recognized that storm water infiltration around the sealed 36-inch line was starting to undermine newly installed piping and posed a threat to the surrounding infrastructure. CNS conducted an Operational Safety Board (OSB) meeting to authorize emergency work to allow expedited modifications to the storm drain and stabilize the construction site in advance of pending storms. The OSB requested that a CNS civil engineer evaluate the proposed modifications as a condition of approval, but due to a miscommunication, the emergency work was started a few hours prior to this evaluation. This week, CNS held fact finding meetings to document the events and identify corrective actions, which include an interim compensatory measure to increase field presence from BNI and CNS personnel until long-term corrective actions can be implemented. To support the development of long-term corrective actions, UPO, NPO, and CNS plan to evaluate the processes for ensuring timely communication of unexpected conditions to all responsible parties during UPF construction.

**Building 9202:** CNS held a fact-finding meeting this week to discuss the activation of a fire suppression sprinkler head in a fan room in Building 9202. A building supply fan located in that fan room was de-energized during a work activity to isolate an electrical ground fault in the facility. When power was restored, the supply fan was not restarted and remained off for four days. During that time, steam was still being supplied to the preheating coils and began to raise the temperature in the fan room until the sprinkler head activated (it is designed to activate at 135°F). This event is similar to two recent events in which a loss of power caused fans to be secured and resulted in activation of a sprinkler head (see 11/27/15 and 1/8/16 reports). Corrective actions from the November event have not been completed. Those actions included the distribution of lessons learned and implementation of compensatory measures to prevent similar events following a loss of electrical power. This week CNS management issued a standing order directing facility managers to develop plans to address loss of power events. Most of the Y-12 Production facilities already have restoration plans in place but this order provides criteria to identify other facilities that must develop loss-of-power plans.

**Work Planning and Control (WP&C):** Earlier this month, CNS Y-12 Infrastructure Management directed a training session for their workforce that re-emphasized the importance of the strict adherence to Lock-out/Tag-out (LO/TO) program requirements. Management's review of events over the last few years indicated an overall reduction in the number of LO/TO-related events (six events in 2014 compared to three events in 2015) but historical records indicate that a larger fraction of LO/TO events tend to occur in the upcoming months. This training is a noteworthy proactive action to further reduce the number of LO/TO events.