

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2017

TO: Steven Stokes, Technical Director
FROM: Jennifer Meszaros and Rory Rauch, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending March 31, 2017

Work Planning and Control (WP&C): This week, managers representing the Y-12 Infrastructure, Operations, and Emergency Services organizations held a critique to evaluate the timeline of events that resulted in a maintenance activity being planned and executed outside of approved Y-12 WP&C processes. The issue occurred during activities to replace sprinkler heads on a safety-class fire protection system in Building 9212 (see 3/24/17 report). During system restoration, construction personnel identified a leak on one of the system's drain valves and notified the fire department. Fire department personnel had been using a Y-12 Emergency Services organization procedure to support these activities (primarily as a means of impairing and restoring the system) and noted some language in the scope and applicability section that appeared to authorize use of the procedure for corrective maintenance. Subsequently, they held a meeting with the responsible quality assurance (QA), system engineering, maintenance, and operations personnel and the attendees collectively determined that the repair of this drain valve could be performed using the Y-12 Emergency Services organization procedure. Fire department and maintenance personnel completed the work with support from engineering, who added required QA approvals via annotations in the comments section of the procedure, and returned the system to service without incident.

Subsequently, managers from the key organizations involved in the work activity reviewed the processes used to plan and execute the work and determined that it was not appropriate to use this procedure for a corrective maintenance activity. They noted that the language from the scope and applicability section cited by the work team to justify the procedure's use was solely intended to communicate that corrective maintenance may be performed *in conjunction* with the procedure while the system is isolated. During the critique, the responsible managers in attendance concluded that the planning and execution of the work was expert-based and did not properly evaluate the hazards associated with the scope of work for the drain valve replacement activity. The managers identified several corrective actions, including issuing a lessons learned and several actions related to improving the coordination of WP&C between the Y-12 Emergency Services and Infrastructure organizations.

Highly Enriched Uranium Materials Facility (HEUMF): Last week, a CNS utility operator improperly isolated a service area that is part of the HEUMF Secondary Confinement System (SCS) after he skipped a step in the operating procedure that directed him to de-energize a solenoid actuated valve (SAV). CNS maintenance personnel previously completed maintenance on an air handling unit (AHU) and did not believe they would finish required post maintenance testing prior to the day's end. As such, they chose to shut down the AHU and isolate the affected service area to maintain SCS operability per the HEUMF Technical Safety Requirements (TSR) until they could complete testing. The shift manager entered the SCS Limiting Condition of Operation (LCO) as required by the HEUMF TSR prior to AHU shutdown and the utility operator proceeded to isolate the service area using the applicable operating procedure. The shift manager exited the LCO after the utility operator reported that he successfully completed the work. Later, during shift turnover, facility personnel noted that the SAV that is used to close dampers and isolate the affected service area was not de-energized as expected. Because the HEUMF TSR requires that a service area be isolated via the appropriate SAV, they agreed that they prematurely exited the SCS LCO. The responsible shift manager thus re-entered the appropriate LCO and the utility operator isolated the affected service area, as required.