DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 5, 2018

TO: Steven Stokes, Technical Director
FROM: Jennifer Meszaros, Resident Inspector
SUBJECT: Oak Ridge Activity Report for Week Ending March 2, 2018

Highly Enriched Uranium Materials Facility (HEUMF): CNS declared a potential inadequacy of the documented safety analysis (PISA) this week after operations personnel discovered that sixteen drums stored within the facility since approximately 2010 contain a material form not currently analyzed in the documented safety analysis. The material was introduced into the facility at that time because it was inadvertently characterized as the wrong material type. HEUMF operations personnel recently identified the drums as part of a corrective action associated with an event that occurred in October 2017. In response to the PISA, the operations manager stopped all hot work in affected storage bays and emphasized an existing control that limits the number of forklifts in storage areas.

Building 9212: CNS held a critique this week to discuss several discrepancies recently found in the reduction system alignment checklist. This checklist identifies system valves and required positioning during normal operation. In one case, the checklist identified two valves as inlet valves and their required position as "open" when both valves are actually drain valves and their required position is "closed". In a second case, the checklist identified several valves and their required positions even though the valves do not exist on the system. Both discrepancies occurred because CNS personnel did not identify that the system alignment checklist was impacted as a result of several system modifications that were completed in 2016 and 2017. Additionally, an operator utilized the checklist while verifying system alignment in 2016 and did not identify the first discrepancy.

Reduction operations have been paused since the beginning of fiscal year 2018 in order to implement unrelated process improvements. Regardless, as a result of this event, engineering and production personnel committed to correcting the system alignment checklist and performing a complete system alignment before resuming operations. During the critique, CNS management committed to reviewing the site procedure governing change control in order to ensure that document reviews associated with system modifications are sufficiently thorough.

Continuing Training: The resident inspector attended a continuing training session this week intended for facility shift managers and shift technical advisors. Training is provided each month by the CNS Y-12 production support organization and typically covers pertinent topics such as recent operational events and changes to CNS programs. This month, the session covered a recent event in Building 9212 during which operations personnel failed to report U-235 weight from a Holden Gas Furnace cleanout surveillance even though they marked the surveillance as satisfactorily completed (see 2/16/18 report). The CNS production support manager used the forum in order to reinforce expectations regarding surveillance execution. Additionally, the training session covered recent issues with certain credited fire suppression system operability surveillances. The resident inspector believes that the training session was effective, and served as a useful forum for facility operations personnel.

Building 9204-2E: CNS held a fact finding meeting this week to discuss recent equipment issues that caused a Kathabar tank to overflow and spill Kathene, or aqueous lithium chloride, onto fissile material storage areas. Responsible facility personnel committed during the meeting to evaluating existing system preventative maintenance and potential system modifications (e.g., installation of audible high tank level alarms) in order to prevent recurrence.