DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending July 8, 2016

Nuclear Criticality Safety (NCS): In fiscal year 2015, CNS identified two NCS analysis issues that Y-12 safety analysis engineering personnel did not enter into the Y-12 potential inadequacy in the safety analysis (PISA) process in a timely manner (see 10/2/15 and 11/21/14 reports). Following each issue, the CNS safety and process engineering manager instituted near-term measures to improve the timely adjudication of the risks associated with potential NCS issues (PNI), but acknowledged that a more substantive measure would be needed in the long-term.

CNS recently enacted this measure by issuing a standing order that defines a process for handling PNIs. This process is intended to supplement the PISA process by defining actions to facilitate timely resolution of PNIs. It states that personnel are to immediately enter the PISA process if at any point during review of the PNI there is an indication of impacts to the facility's documented safety analysis (DSA) or technical safety requirements (TSR). However, some PNIs have no impact on a facility's DSA or TSRs, but still call into question the adequacy of the effective NCS control set. As such, for these situations, the standing order defines a set of steps for notifying management that a PNI exists, evaluating the maturity of the PNI, and documenting the actions taken to resolve the PNI, including any operational restrictions or compensatory measures. The standing order requires the responsible NCS engineer to complete the initial evaluation of the maturity of the PNI and documentation of the actions taken to resolve it within seven business days of its initial identification.

Conduct of Operations: Last April, while performing an assessment of Y-12 control of equipment and system status, an NPO facility representative (FR) identified a Building 9215 coolant settling tray in operation with an unapproved maintenance-generated modification (see 4/15/16 report). During the event critique, CNS identified a series of conduct of operations weaknesses, including a general need to strengthen the control of systems during maintenance activities. The NPO FR captured these weaknesses as an issue in the assessment report, which was transmitted to the contractor on May 31, 2016.

This week, the CNS Y-12 site manager provided a response to the NPO Y-12 associate deputy manager for operations regarding the actions CNS took to address the issues identified during the NPO assessment. As one of the notable actions, the CNS Y-12 Infrastructure manager recently issued a standing order to pilot a process that defines more rigorous expectations for controlling the status of systems during maintenance activities. Key elements of the pilot process include an expectation to establish boundary markers if the jobsite will be left unattended and maintenance will maintain control of the equipment, and an explicit expectation requiring maintenance workers to contact the shift manager when work is paused, suspended, or stopped. CNS Y-12 Infrastructure personnel plan to pilot this process for two months, at which time they will work with CNS Y-12 Production personnel to evaluate the effectiveness of this guidance and determine a path forward.