

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 22, 2016

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending February 19, 2016

**Building 9212:** Last week, while attempting to transfer raffinate solution (a primary extraction output stream with very low levels of U-235) to a tank outside Building 9212, an operator inadvertently manipulated an incorrect valve and transferred the solution to a set of storage tanks. The operator quickly recognized the problem when he observed that the in line gamma radiation monitor was not detecting any U-235 activity. He took the appropriate actions to immediately terminate the solution transfer and contact his supervisor, who in turn notified the shift manager. Operators executed all response actions in accordance with conduct of operations requirements. These actions were simplified by the fact that the tanks that received the solution are approved by nuclear criticality safety for fissile solution storage and are an approved transfer path for raffinate solution. In a follow-up evaluation of the work area, operators identified an obscured valve label and a congested valve arrangement as contributing factors to the event. Enriched Uranium Operations (EUO) management plans to take action to address valve labeling in the area. EUO management also plans to provide a summary of the event to EUO supervisors and workers and request that all areas evaluate their respective work areas and procedures for similar types of floor-level error precursors.

**Technical Procedures:** In response to the Board's 2011 letter concerning weaknesses with Y-12 technical procedures and their implementation, the previous Y-12 contractor took actions to enhance the timeliness, consistency, and ease of use of technical procedures. These actions were tracked in a formal procedure improvement plan, which ultimately resulted in dedicated procedure reviews that improved the quality of several dozen of the most frequently used technical procedures at Y-12. Following contract transition, the CNS management determined that a dedicated procedure improvement plan was no longer needed and transitioned to a strategy that incorporated key tenets of the plan into the site's technical procedure authoring tool. The modified approach will rely on user feedback and the periodic procedure review process to drive improvement in the overall quality of technical procedures.

In order to ensure that this strategy will drive timely improvement, the CNS Technical Procedure and Product Support Manager is taking action to better understand the makeup of the backlog of open procedure modification requests (PMRs). The focus of this action is to determine whether PMRs related to procedure usability improvements, particularly those initiated based on worker feedback, are being processed in a timely manner. The current PMR backlog contains approximately 400 open requests, about half of which are related to "efficiency/process improvements." Of the open efficiency/process improvement-related PMRs, approximately 100 have been in the backlog for more than one year and approximately 60 have been in the backlog more than two years. Based on the information submitted with the PMR requests, it is not immediately clear how many of these open PMRs relate to procedure usability improvements nor is it clear how many are still needed (some date back as far as 2009, when the current approach to submitting PMRs was created). The CNS Technical Procedure and Product Support Manager and Senior Director for Y-12 Production Operations are working together to define the actions needed to improve the tracking and prioritization of items in the PMR backlog. Efforts to improve PMR tracking and prioritization schemes will also better position CNS to effectively respond to any increase in PMRs following the upcoming performance excellence pauses (see 1/22/16 report). During these pauses, CNS management intends to reinforce the message that workers are encouraged to provide proactive feedback on opportunities to eliminate floor-level error precursors.