

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending October 16, 2015

**Aging Infrastructure:** Last February, the NPO Manager and Uranium Program Manager (UPM) issued a joint letter challenging CNS to develop a plan to double the purified metal production in Building 9212 to an annualized rate of 1000 kg (see 2/6/15 report). Increasing purified metal production rates in Building 9212 would aid ongoing material-at-risk (MAR) reduction efforts by increasing the rate at which uranium-bearing solutions are processed into forms suitable for transfer from Building 9212. During the last several months, CNS, NPO, and the UPM weighed different options for improving purified metal production. They ultimately determined that the most prudent first step was to improve equipment reliability and availability by establishing a maintenance team dedicated solely to supporting the equipment that comprises the purified metal production line. Last week, CNS held a kickoff meeting for this Metal Productivity Improvement Team. The team's primary goal in fiscal year 2016 is, to the extent possible, eliminate the maintenance backlog for purified metal production equipment, which currently stands at approximately 200 work orders. This would be accomplished through a series of planned outages that would hinder production in the near term, but should re-baseline the equipment to a more reliable state and facilitate increased purified metal production in fiscal year 2017 and beyond. The establishment of this team also addresses a recommendation from the latest Continued Safe Operability Oversight Team annual report (see 8/7/15 report).

**Building 9204-2E/Conduct of Operations:** Last week, a CNS quality engineer notified Assembly Disassembly Operations (ADO) personnel that a Building 9204-2E life certification oven was transmitting unexpected readings. ADO personnel traced the unexpected readings to a procedure performance error in which workers failed to complete a step to change a valve position while configuring an item in the oven. The error may result in the need to repeat some of the previous operations on the item in question. The procedure governing the operation is categorized as "Continuous Use," which requires placekeeping. During the fact-finding meeting for the event, ADO personnel found that the workers in the area had been using a placekeeping method that was not consistent with the Y-12 Production organization's approved method of placekeeping. ADO management plans to provide a refresher briefing to all ADO crews on the appropriate placekeeping method.

In evaluating the event further, the site reps believe this event was emblematic of a broader concern in that the nature of the operation and the governing procedure's format partially contributed to the work crew's adoption of this unapproved placekeeping technique. For this operation, workers would sometimes have to load and configure multiple items in ovens during the same procedure evolution. As allowed by the procedure, workers could repeat the same step in this process for each item before moving to the next step. To accommodate this approach, workers had established the practice of placing multiple markers next to each step indicating that the step had been read before marking the step as complete for any item. This approach ultimately led to an error in which the worker marked a step that had not been performed as complete. NPO recently completed an assessment of the Y-12 Production organization's field implementation of DOE procedure requirements. One of the issues identified during the review was that the field implementation of the procedure execution methods in the Y-12 conduct of operations manual was not ideal for some processes, and execution was not always consistent with the approved methods. The site reps have observed and communicated other instances of this issue to contractor management during the last three years. Y-12 Production organization management is developing corrective actions to address this concern.