

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 9, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending May 6, 2016

Building 9212/Aging Infrastructure: Last week, a non-destructive assay (NDA) engineer received contamination on his forearm when a drop of process solution dripped from overhead in C-1 Wing. The engineer was part of a surveillance team performing routine NDA surveys in the wing when the event occurred. Though the engineer was wearing the prescribed personal protective equipment (PPE), the acidic solution soaked through the nylon cloth resulting in skin contamination. Initial decontamination attempts were only partially successful, but additional decontamination efforts reduced the readings to less than detectable levels. The drip was from a connection between a drain valve and a length of Tygon tubing that had recently been used to transfer solution. As one of the corrective actions, radiological control personnel will evaluate the adequacy of the prescribed PPE for activities in C-1 and B-1 Wings of Building 9212. In addition, the valve has been identified for repair during an upcoming maintenance outage in July. The July outage is one in a series of outages in support of the Metal Productivity Improvement initiative (see 10/16/15 report). This initiative was implemented at the beginning of this fiscal year to reduce the backlog of maintenance jobs in Building 9212 and improve the future production rate of purified enriched uranium metal.

This week, in a separate but similar event, a maintenance worker erecting a scaffold in B-1 Wing noted discoloration on the forearm of his PPE coveralls. With the support of radiological control personnel, the worker doffed his PPE and discovered skin contamination on his forearm. The contamination levels were lower than the event noted above and easier to decontaminate to below detectable levels. Corrective actions will be formulated upon completion of the CNS fact-finding meeting for this event.

Building 9212 is 71 years old and the processing equipment requires continuous maintenance to keep it operating safely. CNS Facility Engineering personnel have closely tracked and pursued repairs of identified leaks. In 2010, there were 120 identified leaks from various equipment awaiting repair in Building 9212, but continuous effort to repair new and previously identified leaks has reduced the number of leaks awaiting repair to 47.

Building 9204-2: Last month, a machinist's hand was cut when the glovebox glove he was using got caught by a rotating cutting tool. The machinist believed that he had turned off the machine and was reaching to release the cutting tool when the event occurred. This glovebox work does not involve radiological materials. CNS corrective actions included reviewing the job hazard analysis and the operator interface with the machine's control panel. Currently, CNS management is pursuing the installation of a conspicuous indicator light that will warn the machinist that the cutting tool is still rotating.

Work Planning and Control (WP&C): Last week, an NPO facility representative (FR) observed a test evolution that was intended to gather component data for a design agency. Following the evolution, the FR questioned what work control documentation had been used for the evolution and learned that none had been developed. This week, CNS held a fact-finding meeting to discuss the WP&C for the test. The fact-finding meeting identified several actions—including the need to develop work control documentation for the test evolution—but also revealed a broader need to improve the implementation of WP&C for atypical work requests. The Y-12 Deputy Site Manager is working with the Director of Nuclear Safety Oversight to establish a team to address the issue.