

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 20, 2018

TO: Steven Stokes, Technical Director
FROM: Jennifer Meszaros, Resident Inspector
SUBJECT: Oak Ridge Activity Report for Week Ending February 16, 2018

Building 9212/Nuclear Criticality Safety (NCS): Last week, an NCS engineer requested historical Holden Gas Furnace (HGF) holdup data to support his review of a planned maintenance activity. In response, the facility manager obtained the data and identified several historical violations of an NCS limit applicable to HGF operations. Operators clean out material from the HGF on a quarterly basis in order to ensure that no more than 500 g of U-235 accumulate in certain areas of the furnace. Surveillance records associated with the cleanout activity indicate that operations personnel have consistently failed to report U-235 weight even though they marked the surveillance as satisfactorily completed. Subsequent review of the non-destructive analysis (NDA) data associated with the cleanouts determined that material removed from the HGF exceeded the 500 g U-235 limit on two occasions in the last year.

As a result of the event, facility management paused HGF operations. The HGF cleanout surveillance requires that operations personnel review NDA data after the cleanout activity and compare the amount of retrieved U-235 to the NCS limit. NCS engineers thus reviewed surveillances that implement other NCS limits in a similar manner but did not identify any other related issues. CNS also held a fact finding and a critique meeting this week. During the fact finding meeting, attendees identified a corrective action to revise and improve the surveillance prior to restarting HGF operations. During the critique meeting, senior managers committed to a causal analysis that will further evaluate the event.

CNS is continuing to make progress on the extent of condition review initiated after uranium holdup was identified in the reduction sand separator (see 6/2/17, 7/14/17, and 11/9/17 reports). As a part of the extent of condition review, CNS also identified unanalyzed uranium holdup under the Building 9212 casting line (see 12/15/17 report). Given this most recent event, CNS is evaluating modifications to the scope of their extent of condition review plan.

Building 9204-2E: A production support specialist recently discovered that operators used the wrong revision of a design agency specification on several occasions during assembly operations. Although Building 9204-2E personnel periodically verify they are using the most recent revisions of technical procedures as required by Y-12 conduct of operations protocol, design agency specifications are controlled and issued using different document management practices. As such, Building 9204-2E personnel do not verify that they are using the most recent revision of a specification using the same process developed for technical procedures. This week, facility management held a fact finding meeting to further discuss the event. During the meeting, attendees noted that no assemblies were impacted as a result of the event. They committed to improving the method by which facility personnel verify that they are using the correct specification revision. They also agreed to evaluate the applicability of an ongoing review of site document management practices that was initiated as a result of similar Building 9204-2E events (see 10/28/16 and 12/23/16 reports).