

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 July 3, 2015

Z. McCabe was at Y-12 to augment site representative coverage.

Building 9212/Technical Procedures: Last month, a process flow indicator failed during a Reduction Fluid Bed (RFB) run in Building 9212. This indicator is linked to a controller that automatically adjusts related process parameters. After taking appropriate actions to notify the shift manager of this condition, operators attempted to enter an abnormal operating procedure (AOP) to switch to manual control of the parameters. The AOP could not be performed as written, so operators executed the procedure steps for safe shutdown of the RFB and initiated a revision to the AOP that would allow completion of the RFB run. Rather than attempting a more expeditious on-the-spot (i.e., handwritten) change to the AOP, personnel made the conservative decision to perform a formal procedure modification, which required a verification and validation of the AOP prior to use.

There were two reasons why operators could not initially perform the AOP as written: (1) the AOP had been written for a different point in the RFB run and (2) some AOP steps were inconsistent with the main operating procedure. These inconsistencies had been introduced over the course of several years by changes to the main operating procedure that were never reconciled with steps in the AOP (e.g., changes in system operating parameters). The procedure that governs the process for modifying technical procedures does not contain an explicit requirement for personnel who initiate a change to a technical procedure to review and reconcile any inconsistencies with interfacing procedures. The technical procedure process owner recently submitted a procedure modification to incorporate this requirement.

Nuclear Criticality Safety (NCS): Last week, NCS personnel identified several issues with the implementation of NCS controls derived in an addendum to a criticality safety analysis. The addendum in question, which was issued in 2001 and remained in effect until last week, addressed a concern involving chip dollies—carts that contain two NCS-safe geometry cylinders in which the enriched uranium chips from machining operations are collected. The concern was that some chip dollies have cylinders that can tilt sufficiently to violate NCS spacing requirements. The 2001 addendum identified two administrative controls—a requirement to handle one chip dolly at a time and a requirement to ensure that the cylinders are returned to an upright position after any handling activity—to address the spacing concern until an engineered fix could be developed. These controls were never implemented. Further, the technical basis in the addendum was not updated when Production switched to a different chip covering fluid in 2007. NCS has since issued a new NCS analysis and Production has implemented the controls. CNS plans to hold a fact-finding meeting on this issue next week.

Building 9212/ NCS: Late last week, per NCS direction, workers performed additional inspections of the HEPA filter housings tied to a Building 9212 exhaust ventilation system for the presence of excess moisture (see 6/26/15 report). Workers did not find excess moisture in any of the other housings and continued with the HEPA filter replacement activity. The inspections also revealed that the excess moisture found previously in one filter housing would not have been considered an NCS parameter upset condition as no moisture was found on or around the HEPA filter media. Nonetheless, operations in the affected area will remain on hold until NCS and system engineers formally document an evaluation of the possible source of the excess moisture and provide recommendations to minimize future accumulation.