

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 22, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending February 22, 2013

H-Canyon: Much of this week was spent developing a plan to disposition the hoses and steam cart that appear to contain dissolved spent fuel (see last week's report). The site rep observed portions of the team activity hazards analysis, two mockups, and a management review of the procedure and radiation work permit. Based on the measured dose rates, a rough estimate is that the steam discharge hose could contain 100 ml of solution. SRNS decided against trying to blow any solution out of the hose. Instead, they plan to disconnect the two hoses, place bags over the hose ends, and then place the two hoses inside a 110-gallon drum that has several lead blankets strapped to its side. A worker would push the shielded drum on a transport cart to a freight elevator, which would carry the drum and cart upstairs. In the hot canyon crane maintenance area, workers would remove the lead blankets and then a crane would lift the drum with a sling. The drum would be stored on a cell cover until it could be disposed as waste. Because of the high radiation doses, workers will be wearing lead aprons and shielded gloves. Workers repeatedly practiced and timed their mockups to help minimize their exposure times. Two of the managers in the facility volunteered to perform some of the more dose-intensive tasks.

H-Canyon operated the portable seismic back-up air compressor because the two primary process air compressors were unavailable. A fact finding meeting will be held Monday to determine why the portable air compressor was allowed to shut down due to lack of fuel.

L-Area: Engineers are investigating why the lid guide plate for an empty 70-ton fuel cask contacted the east transfer bay carriage monorail while being transported. While the clearance is tight, the first lid guide plate did not contact the monorail as it passed by and the crane position lights were illuminated so there should not have been any problems. Potential issues being checked include whether the cask was slightly cocked, the second lid guide plate was bent, or whether the crane controls had drifted.

Actinide Removal Process /Modular Caustic Side Solvent Extraction Unit (ARP/MCU): Tank 49 serves as the feed tank for ARP-MCU. The transfer pump in this tank has failed, resulting in ARP/MCU being shut down until the pump can be removed and replaced with a new pump. Significant rainfall this week has delayed the replacement and it is now expected that the pump will be replaced early next week.

Tank Farms: Tank 12 was scheduled to undergo Bulk Oxalic Acid cleaning but has been delayed because of downstream problems with the next sludge batch. In order to fully utilize resources, the site is going to do the salt dissolution of tank 10 sooner. The salt dissolution of tank 10 will require an above ground transfer from tank 10 to tank 11. The necessary transfer lines and shielding are being put in place. The site rep is reviewing the placement of this shielding to ensure the appropriate high radiation controls are applied.

Tank Farms personnel are preparing go into an outage to complete the movement of the monitoring and control functions to the fiber optic cable and the distributed control systems as part of the F and H- Tank Farm Control Room Consolidation. Tank farms personnel completed their Facility Self-Assessment (FSA) for the upcoming outage. They have several corrective actions that must be completed before they begin the contractor's readiness assessment on March 4. Once they begin this outage they have limited time to complete the outage and resume normal operations. All corrective actions are currently on schedule.