

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 5, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending April 5, 2019

L-Area: Criticality blocking devices are used to prevent spacing violations and are attached to the monorail system to prevent the movement of fuel. Due to a recent issue with cropping fuel assemblies, workers relocated a bucket of four fuel assemblies to a row that had not been used to store fuel for a couple of years. A fuel criticality rules procedure required that mechanical blocking devices needed to be installed on an adjacent row. This same procedure includes a log for temporary blocks specifying the location and has sign offs for their installation. The primary fuel movement procedure includes a step to “install and identify mechanical blocking device(s) to prevent improper fuel storage,” but does not provide additional detail. During the task preview and pre-job briefing, the discussion focused on where to install criticality blocks on the storage row, but there was no discussion about the need for blocks on the adjacent row. While the shift operations manager and qualified first line manager (FLM) were aware of the requirement for blocks in the adjacent row, they later forgot about it. The other workers and the FLM under instruction had no prior experience with the use of criticality blocks in adjacent rows. While the crew brought the correct number of blocks to the field, the significance of the extra blocks at the end of the job was not realized nor was the lack of blocks in the adjacent row noticed during the manager’s post performance review. This left a situation where an accidental criticality is possible from the loss of one additional control. Three days later, a basin FLM working in the area noticed that the criticality blocks were missing from the adjacent row and notified the SOM. A time out was called and the blocks installed. Management halted all fuel handling activities. Corrective actions will address procedure content, pre-job briefings, training on criticality controls, and status control of the blocks. L-Area also experienced a total loss of power after a utility employee accidentally closed a relay and L-Area happened to be on a single electrical power feed at the time.

H-Canyon: H-Canyon workers sent nine radiological samples to F/H Laboratory for analysis while the documentation only reflected five. H-Canyon Outside Facilities (OF) workers placed 8 (of the 9) samples in four poly bottles in sets of two and included two labels on the outside of the poly bottles (one for each sample inside). Although it is unclear how common this practice is, some unclear verbiage in the procedures appears to allow including multiple samples in a single poly bottle. Before H-Canyon workers shipped these samples the H-Canyon building FLM (BFLM), believing it was inappropriate, noted that 4 of the 5 poly bottles held multiple samples and requested the OF FLM resolve the issue. The next day, OF workers notified the SOM and BFLM (different shift than before) that the shipment was ready; but they did not repackage any of the samples because the OF FLM did not believe it was an issue. It does not appear that the OF FLM discussed this conclusion with the BFLM or the SOM. F/H Laboratory noted the discrepancy and raised concern once they received the shipment. H-Canyon workers were able to quickly provide F/H Laboratory the additional sample information to allow work to resume. H-Canyon workers are planning to revise the procedures to clearly state the expectation of limiting to one sample per poly bottle. They are also evaluating corrective actions to address the dismissal of the BFLM’s concerns and lack of communication of the decision to do so.