

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 10, 2010

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending December 10, 2010

Critical Lifts: The site reps observed Parsons install two 90-ton contactor modules inside the Salt Waste Processing Facility as well as SRNS remove the original 35,000 lb Acid Recovery Unit vessel at H-Canyon. These lifts were well executed.

E Area: Representatives of EM-22 were on site to review the actions taken immediately following the transuranic waste spill at pad 16. (See July 30, 2010 report). The site rep attended the closeout discussions, which seemed to align with previous site rep comments. Two of the observations have site-wide implications:

- the use of suspension guides in lieu of limiting conditions aligned with DOE Std 1098-2008 *Radiological Control*, and
- the need to issue operating experience lessons learned to alert other sites of significant events.

F Tank Farm: The tank farm is planning to insert a small remotely controlled mechanized tracked vehicle (crawler) into tank 5 to sample the remaining material. The site rep attended a presentation regarding the radiological aspects of planning for this job. Because of the strong desire to remove the crawler from the tank without adding flush water, they plan on removing the crawler unless it becomes stuck. This action is problematic because of the potential high contact dose rate (hundreds of rad/hour is expected) from the contaminated crawler. The team plans to better quantify the dose rates, determine if there was a way to reduce the hazard, and potentially leave the crawler in the tank if the dose rates are too high.

Saltstone: SRR completed field work on their Operational Readiness Review. In general, the conduct of the ORR and the facility's readiness were satisfactory. Since this will be the first time that Saltstone has Limiting Conditions for Operations, interviews focused heavily on scenario-based questions on when operations needed to enter Limiting Conditions for Operations (LCO) or declare a Technical Safety Requirement (TSR) violation. These interviews identified some TSR level of knowledge issues at several levels in the operations staff. The site rep is concerned that the facility's approach using open book tests and teaching the staff to reach for the TSR for every question negatively impacted their knowledge of TSR fundamentals. For instance, operations staff wanted to read from the TSRs to answer even basic questions like what is a LCO or specific administrative control and what causes a TSR violation.

H-Canyon: While transferring sodium carbonate from an outside tank to a tank inside H-Canyon, the chart recorder failed to indicate that any material had transferred. Despite the outside instrumentation indicating a sufficient quantity of material had been transferred, the team, under supervisor direction, continued to transfer material. The outside operator eventually took the correct action to stop the transfer, but not before the tank overflowed into the caustic drain header. H-Canyon staff later found the chart recorder to be defective. The site rep believes that this failure was partly due to the age of the equipment.

Heavy Water Components Test Reactor (HWCTR): After preheating a reactor vessel nozzle using an acetylene torch, acetylene apparently leaked from the gas cylinder or torch afterwards into the work area. The acetylene was detected by a nearby carbon monoxide monitor before it approached the lower flammability limit. While the workers were wearing respirators for other reasons, the hazard was not properly analyzed.