

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 17, 2015

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman, Site Representative
SUBJECT: Savannah River Site Weekly Report for Week Ending July 17, 2015

Saltstone: The 450-gallon grout hopper is located between the mixer and the grout pump to ensure steady flow of material. During a periodic flush of the hopper, the grout hopper stopped draining properly. This caused the level in the grout hopper to increase from 300 to 410 gallons, at which point the hopper contents started to pass through the overflow line into the Saltstone hopper overflow container (SHOC). This high level also caused the software to stop dry feed to the mixer and transition from salt solution to inhibited water. Subsequent flushes of the mixer caused water to enter the hopper and overflow into the SHOC. Once the SHOC was full (~700 gallons), the solution overflowed into the process room trench, where ~300 gallons drained back into the salt feed tank before this drain line plugged and caused additional flush water to collect in the process room trench. Normally, a three-way valve downstream of the grout hopper can be opened to drain the grout hopper contents into the SHOC, but this valve only opened 15% of the way, which slowed down the diversion. Furthermore, one of the grout peristaltic pump hoses became dislodged from the inlet flange. SRR was able to clear much of the downstream grout transfer line with a high pressure flush and propelling a rubber ball through the grout transfer line by compressed air. Afterwards, SRR collected the water from the process room into carboys, started removing the plug in the trench drain, photographed and began cleaning out the grout hopper, prepared to replace the grout pump hose, and removed the plugged grout piping and stuck valve to be autopsied later. SRR's initial review of the process parameters did not identify any abnormal indications. A more detailed review of possible causes is planned for Monday.

Waste Solidification Building: An insulator working inside an air handling unit vestibule received a shock when his upper arm accidentally contacted the vestibule exhaust fan, which had a torn rubber boot over a fan motor capacitor. The capacitor voltage was 355 volts, but the insulator was later released without restrictions. A subsequent inspection found two other vestibule exhaust fans that also had degraded rubber boots over their fan motor capacitors.

Facility Representatives (FR): The Department of Energy (DOE) currently only has three fully qualified facility representatives covering F and H-Tank Farms, Saltstone, the Defense Waste Processing Facility, and the Solid Waste Management Facility (SWMF). When one of those FRs goes on a 10-week detail, DOE will not have a fully qualified FR to oversee the SWMF. While DOE has hired several new FR candidates, it will take several months to train and qualify them.

Emergency Preparedness (EP): Last week, SRR issued a corrective action plan with 40+ actions. SRR also identified their staffing resources through 2017, revised the template for conduct of operations drills, started work on new drill scenarios, and began work on a spreadsheet to track what drills are performed by each shift over a 5-year period. SRNS issued a scoping document for the creation of a consolidated drill team within the training organization. This team would develop, conduct, and evaluate drills across SRNS in accordance with a 5-year drill schedule and to ensure consistent expectations and performance. Assuming funding is found, the team would consist of a manager, 4 scenario writers, and eight drill team members.