

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2018

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 June 29, 2018

235-F: Workers are placing Lexan panels on cell windows in preparation for upcoming remediation work. Workers stopped the job twice when they encountered contamination levels (up to 7.7 million dpm α) that exceeded the radiation work permit (RWP) task suspension guide. Work resumed under different RWP tasks and upgraded personnel protection equipment – first fresh air hoods, then plastic suits. The resident inspector and Mr. David Cleaves also observed a drill where a worker accidentally set off a building loss of ventilation alarm. While this was conducted per the scenario package, it only involved workers in the radiological buffer area.

H-Tank Farms: SRR has completed their preparations and should begin transferring high-level waste in Tank 15 to another tank in the next few days. The transfer will lower the waste level below an active leak site. (See 6/15/18 report). SRR has determined the full extent of the sink hole next to the 2H Evaporator. The exact cause is unknown, but a known plant air leak nearby is suspected. Once SRR confirms the integrity of the vent line that passes beneath the hole, SRR will begin backfilling the hole. (See 6/22/18 report).

Savannah River National Laboratory (SRNL): An electricity and instrumentation (E&I) mechanic was replacing a fluorescent bulb in a laboratory when he was inadvertently exposed to a hazardous energy source (110 volts) and received an electric shock. After replacing the last bulb in the fixture, the E&I mechanic noticed that the starter was not seated properly. The E&I mechanic then removed the starter, inspected it, and replaced it, which resulted in the shock. The E&I mechanic immediately stopped work and notified their supervision. SRNL personnel then took immediate action to prevent others from being exposed to the hazardous energy until the fixture could be de-energized and the laboratory barricaded. Per the discussions during the subsequent fact finding meeting, the E&I mechanic was utilizing proper hazard controls including the appropriate personal protective equipment (PPE) and a fiberglass ladder. During the work, the light fixture was energized as permitted by the work package because the expectation was that there would be no voltage present in the accessible locations of the light fixture. At this time it is unclear what caused the electric shock. SRNL personnel are planning on investigating and troubleshooting the fixture to determine the cause. Once the cause is determined, SRNL personnel will develop corrective actions to attempt to prevent recurrence.

The resident inspector observed a research and development evolution at SRNL. The principal investigator performing the work was knowledgeable of the reference procedure being used and the several hazard analyses related to performing work and maintenance in the specific laboratory. Further, the principal investigator properly implemented the required hazard controls (e.g., PPE) during the resident inspector's observation.

Work Packages: SRNS has thousands of work packages that are task finished, but which were not submitted to document control. For the last decade, they have been trying to locate, restore, or recreate these. During the last 9 months, SRNS has reduced the number from 4557 to 3057.