

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 2, 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 July 2, 2010

Puncture Wound: The Phase I review of TRU remediation at H-Canyon identified actions to increase control of tools, better specify approved personnel protective equipment (PPE), and train workers on the limitations of PPE. Remediation resumed under continuous senior supervisory watch. The site rep attended the pre-job briefing and observed workers unload a large steel box and size-reduce its contents.

SRNS began a similar review at F-Canyon and commenced the formal root causes analysis of the recent puncture wound (see June 18 and 25 reports). SRNS also plans to conduct a more comprehensive management review of F-Canyon TRU remediation before allowing work to resume.

Emergency Preparedness: Last week, the site rep questioned the feasibility of purging H-Canyon tanks after a seismic event within 8 hours. SRNS has changed their implementation strategy so that it doubles both the number of tanks that can be purged simultaneously and the purge flow rate. The site rep also observed control room response during an emergency drill.

The site rep walked down the seismically qualified building where dedicated emergency portable ventilation systems (DEPVS); the generators, flexible ducting, and riser connections associated with the DEPVS; and dedicated portable hydrogen and oxygen monitors are stored in case of an earthquake. The site rep also reviewed completed surveillances and installation procedures. SRR will modify their DEPVS installation procedure to ensure that DEPVS are only used for seismic events.

H-Canyon: The new Double Contingency Analysis (DCA) includes five anticipated and five unlikely criticality scenarios with high radiological consequences to the facility worker where none of the identified administrative controls was classified as safety significant (SS). The DCA states that the two to six general service controls that were listed perform a SS function and instead credits the SS criticality safety program. The staff will review their basis for why none of these controls was made a specific administrative control.

An operator transferred nitric acid between two tanks without completing two nuclear safety control steps.

Saltstone: During a process run Sunday, a premix screw feeder low-low alarm automatically initiated setback. Meanwhile, the level in the grout hopper increased and the grout pump speed started to fluctuate before it failed. Attempts to restart the grout pump failed and the grout pump rupture pin lifted. SRR will spend 3 weeks removing grout from the system, rebuilding the rupture pin, and replacing the grout hopper, some process room piping and the grout pump hose.

H-Tank Farms: The Modular Caustic Side Solvent Extraction Unit (MCU) resumed sample and send operations last week, but suspended it after samples indicated high Isopar™ in the strip effluent hold tank. Meanwhile, MCU processing reverted to sample and hold mode.