

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 6, 2012

**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 January 6, 2012

**H-Canyon:** Last summer, SRNS used a robotic crawler to inspect the first 135' (~1/3) of the process air exhaust tunnel. Because of obstructions, the camera could only inspect the floor and center wall along with a small fraction of the roof and exterior wall. In two spots (total ~15-20' long) of the center wall, the interior concrete surface had degraded, exposing both vertical and horizontal reinforcing bars in several places. The degradation is likely due to acidic vapors. Based on the amount of rebar visible and the observed heights and locations of debris piles, engineers qualitatively judge that on average at least 5/16" of clear cover remains on the surfaces of the walls and roof. Calculations indicate that this is sufficient for the tunnel to meet its required safety function. However, since they could not inspect most of the roof and exterior wall and rebar was seen in localized areas of the center wall, they performed other calculations assuming rebar was exposed throughout the walls and roof and assuming the concrete was cracked. With all code based design factors of safety removed, the calculation indicates that the tunnel could support gravity loads, but not seismic ones. To address these uncertainties, engineers are planning to insert another crawler further down the tunnel to perform additional inspections. They also plan to insert a H-Canyon concrete core sample into the tunnel to measure the rate of concrete erosion.

**Salt Waste Processing Facility (SWPF):** The site rep performed a field observation of the SWPF construction site. Construction is progressing although it is evident that the project will experience further delays since the vendor did not deliver the large steel vessels to Parsons in December as promised. Parsons representatives estimated that a delay of at least two months was probable. This week while cutting tubing used as a pipe support a can of highly flammable solvent fell out of the freshly cut pipe. Had the worker hit the can of solvent with the grinding wheel a violent reaction could have occurred. Parsons and DOE are determining the corrective actions necessary.