

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 2025

**TO:** Technical Director  
**FROM:** Savannah River Site Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending June 20, 2025

**Staff Activity:** A new resident inspector reported for duty at the Savannah River Site.

**H-Canyon:** During a review of a potential inadequacy of the safety analysis (PISA) regarding the frequency of a potential hydrogen deflagration in the segregated solvent tanks in Outside Facilities (see 5/2/2025 report), H-Canyon personnel identified another issue involving a violation of the material inventory limits within the segregated solvent tanks. H-Canyon personnel began investigating the plutonium content of the segregated solvent tanks after discovering the hydrogen deflagration PISA issue, and they received unexpected sample results. H-Canyon personnel concluded that several tanks within the segregated solvent tanks had exceeded the material inventory limits (on the order of  $10\text{E-}6$  PEC/L), and that the limit was likely exceeded for over a decade over multiple safety basis revisions that changed the inventory limits for the segregated solvent tanks. While these tanks are sampled routinely for material accountability purposes, the sample results are not evaluated against the safety basis inventory limits. In fact, H-Canyon does not have an established mechanism for verifying that the segregated solvent tanks are below the inventory limits. H-Canyon personnel are in the process of developing corrective actions, and they have declared a Technical Safety Requirement violation and a new PISA. They determined that the PISA did not represent a positive unreviewed safety questions, as the event of concern is bounded by other scenarios.