

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2011

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 8, 2011

L-Area: The staff is reviewing the inventory of isolation cans storing fuel in the basin to identify items that may not be ideal for long-term storage. The basin contains ~200 sealed K Cans where a bar is wedged on top of a plate to form a seal with the can body. A 2005 contractor report states that “the seals have likely failed.” If the seal failed in any of the ~100 cans containing uranium metal fuel, the “U metal would react with the water reducing the fuels to oxide rubble.” The basin also contains < 10 Z cans containing metal fuel, a couple of which have ruptured. In addition ~50 slug cans contain U metal and alloy fuels. These slug cans have a hole drilled in the lid, allowing water to enter and corrode the metal fuels. All of the above containers have secondary containment though, which would confine the corrosion products.

H-Canyon: The latest large steel box to be remediated not only contained a glovebox, but also dozens of degraded cardboard boxes labeled “radioactive waste” and an estimated 100+ plastic and glass bottles. Engineers provided guidance on how to handle any potentially pressurized containers and the degraded boxes. The site rep observed workers safely remove the contents.

H-Canyon launched a Lean/Continuous Improvement Project whose goal is to reduce the base operating cost by 30%. The site rep intends to observe activities related to facility management, design authority engineering and nuclear and criticality safety engineering. Meanwhile, DOE is pursuing an option that may allow limited hot operations to continue next year.

Facility Worker Controls: SRNS discussed their proposed revised policy for worker self-protection (see 4/22 and 5/20/11 reports). While the site rep conceptually agrees that a worker should not be assumed to put himself in danger or linger for many hours/days next to an obvious accident for the unmitigated analysis, the site rep and contractor have different opinions on how fast a worker could realistically identify a hazard and evacuate the scene under credible circumstances.

HB-Line: The site rep observed demonstration runs to prepare for next week’s Readiness Assessment for highly-enriched uranium metals. The runs revealed many procedure and equipment problems that need resolution before declaring readiness.

Saltstone: SRR not only set a monthly processing record in June (520,000 gallons), but did so with fewer runs than the previous record. Processing in July has been on hold, though, due to a plugged drain water line.

K-Area: SRNS construction workers were working in the Purification Area Vault (PAV) when a construction laborer fell from a Tele-tower®. The worker may have fallen from as high as 12 feet onto a concrete floor. The employee sustained injuries during the fall and site personnel responded appropriately and air lifted the employee to the hospital where they have hospitalized him. SRNS took appropriate actions to preclude recurrence of the event and suspended work inside the immediate area. DOE is preparing for an accident investigation.