

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 30, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** M. P. Duncan and M. T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Report for Week Ending November 30, 2007

Mr. Duncan reported to SRS as the new Site Representative.

**Transuranic Waste:** The drum that was breached last week by a forklift was overpacked and the floor is being decontaminated. Shipment of high curie drums between E and F Areas began.

**HB-Line:** A 3013 can containing plutonium-contaminated enriched uranium metal was placed into the outer can cutter backwards. When the outer can was cut, the inner can was also partially cut because the tapered end (which provides a gap) was not facing the cutter. Although initial contamination surveys were negative, subsequent handling resulted in an air monitor alarm.

**H-Canyon:** The lower uncertainty for the “total” acid concentration was initially used instead of the higher “free” acid uncertainty when checking the free acid concentration after dissolving enriched uranium metal. This is a criticality safety requirement to ensure complete dissolution.

The contractor had commercial nuclear plant life extension (PLEX) experts review their PLEX programs and walk down H Canyon. Over the next year, the contractor will be preparing procedures and acceptance criteria for comprehensive aging assessments of plant structures, systems, and components.

**Plutonium Disposition:** An integrated material flowsheet and life cycle roadmap have been developed for potentially processing the plutonium inventory through H-Canyon and the Mixed Oxide Fuel Fabrication Facility. DOE is reviewing the proposed strategy and conceptual design.

**Defense Waste Processing Facility:** Improvements in the waste feed rate and waste loading percentage have resulted in record waste throughput rates in the melter. Improvements are now being sought for Sludge Receipt and Adjustment Tank operations since that cycle time now limits the overall throughput.

**Tank Farms:** The 2F Evaporator resumed operations after being shut down since Labor Day due to a feed pump failure.

**Spent Fuel:** A failure analysis of a fuel handling tool concluded that the tool was most likely damaged in a non-fuel handling application. (See 11/2/07 report). The damage to the tool fingers prevented the fingers from fully closing. A root cause and human performance analysis was also conducted because three fuel elements have been dropped over the last 12 months. An extent of condition review identified additional layup requirements at inactive facilities (i.e., C and R reactors) that were not being performed. (See 11/16/07 report).

**Savannah River National Laboratory:** The Site Rep observed a review of the procedures and controls for inspecting and sampling solids in three of the High Activity Waste tanks.