DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 25, 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 February 25, 2011

SRNS Workforce Restructuring (WFR): The cumulative reductions in staffing levels due to the voluntary and involuntary WFR and related transfers out of the organization are as follows:

- H-Canyon/HB-Line (HC/HBL) 18%,
- Analytical Laboratories/F-Area Operations (AL/FAO) 16%,
- K-Area 26% and L-Area 14%.

Organizations especially hard hit include:

- engineering at HC/HBL/AL/FAO (26%),
- operations in K-Area (26%),
- maintenance/work control in HC/HBL (20%), AL/FAO (24%), and L-Area (20%),
- and training in K-Area (50%) and L-Area (33%).

H-Canyon: DOE and SRNS are discussing conceptual staffing cases that range from de-inventoried/minimum safe to sustainable operations to hot operations. These cases have widely varying impacts on the ability to keep equipment operable, retain qualified staff, and the capability of resuming operations. SRNS is examining the used nuclear fuel inventory to determine which types may not be suitable for long-term storage as well as what plutonium items could be repacked for off-site disposal or pretreated for the Mixed Oxide Fuel Fabrication Facility.

Emergency Preparedness: A site rep review of the expected response actions to a seismic event identified incompatible actions in H-Area. The unmitigated dose consequence to a co-located worker from an extremely unlikely seismic event plus fire at the tritium facilities is 6200 rem. (In a real event, the actual dose may be reduced by non-credited controls and prevailing weather conditions). Rather than rely on seismically qualified storage equipment or interlocks, the credited control is the emergency preparedness program. Following a seismic event, tritium emergency procedures call for either an evacuation or a "remain indoors" (with the building ventilation system turned off) until the plume has passed. Wind direction and potentially damaged roads could preclude an evacuation by vehicle from H-Area. Remaining indoors may not be feasible for workers located in the many non-seismically qualified facilities in H-Area. Due to the dangers of collapsed or structurally suspect facilities, workers may be forced to evacuate them if they are damaged or until their structural integrity can be confirmed through inspections. Furthermore, planned responses at nearby facilities may make sense in isolation, but could put their workers at risk if their facility was in the path of a tritium plume. For example, H-Canyon's procedures require workers to evacuate to one of two outside rally points, both of which border the tritium area. Furthermore, H-Canyon and H-Tank Farms Technical Safety Requirements drive workers to set up and operate an air compressor or portable ventilation equipment outside so that they can begin purging flammable gases from their tanks. Finally, H-Canyon emergency procedures instruct operators to keep at least two canyon exhaust fans running, if possible, which could draw tritium-contaminated air into the facility. The above situation illustrates the need to look at an integrated response to common events. For example, a safer response may be to delay operator actions outside until 1) tritium facilities confirmed there was not a release or 2) the plume passed by.

Savannah River Remediation: Dave Olson was named President and Project Manager of SRR.