

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 3, 2011

TO: T. J. Dwyer, Technical Director
FROM: D. L. Burnfield, Site Representative
SUBJECT: Savannah River Site Weekly Report for Week Ending June 3, 2011

H: Tank Farm: The high-level waste stored in the tank farms produces hydrogen from the radiolysis of the water contained in the waste. The site has installed forced ventilation systems designed to purge the bulk vapor space of the tanks. These purge systems preclude the unchecked accumulation of flammable material to the point where flammable conditions may arise. The purge ventilation system includes an exhaust fan that draws suction from the bulk vapor space of the tank, pulls the gases through a HEPA filter, and exhausts the gases out of a stack. Because these systems preclude offsite consequences to the public, they are classified as safety class systems. During maintenance of other components on tank 11 it was noted that the purge fan motor was running very hot. The fan motor failed later on Thursday. Tank 11 is classified as a tank that slowly generates flammable material and is therefore in a stable condition as long as activities such as waste transfers are precluded. SRR has applied the appropriate controls and is attempting to replace the fan this weekend.

Work Planning and Control: Both SRNS and SRR (as a part of URS) are taking actions to improve the work planning and control processes at the site. URS has developed standard company guidance for improving their processes. SRNS controls the site wide procedure for work planning and control. Currently, there are seven different ways to plan work on the site. SRNS is undertaking a change in the site procedures to limit the number of methods to those for operating procedures; research and development at SRNL, work being done as part of ARRA, and work being done as maintenance, construction, and other subcontracting work. At the same time SRNS plans to incorporate the URS guidance.

H-Canyon Outside Facilities: During the sampling of the enriched uranium storage basin sump, an operator unintentionally closed a valve supplying air to the sump level detection. The level detection is one of three required controls to prevent an inadvertent criticality in the sump. As part of the procedure to perform the sampling, the operator was required to check the air supply valve was open prior to opening and then closing the sparging valve. SRNS believes it was at this point that the operator closed the valve; however, facility personnel did not identify that level indication was inoperable for several days when the sump level did not change after a severe rainstorm. SRNS personnel have reviewed the procedures and have determined that the valve is always required to be open. Facility personnel administratively tagged the valve to the open position and have reviewed other similar valves to ensure the condition does not exist elsewhere.

F/H Laboratory: The Site Rep performed a facility observation of the laboratory with SRNS and DOE radiological protection personnel. The areas of concentration were rooms where contamination events have occurred in the past associated with the evaluation of samples from the tank farms. The corrective actions taken by the facility appear to appropriately deal with the problems that occurred in the past. SRNS has made obvious strides to improve the housekeeping and general appearance of the facility.