DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 2, 2008

TO: J. Kent Fortenberry, Technical Director
FROM: M. P. Duncan and M. T. Sautman, SRS Site Representatives
SUBJECT: SRS Weekly Report for Week Ending May 2, 2008

Systems Engineering Program: The Site Rep met with DOE and WSRC Liquid Waste Operations (LWO) Engineering managers to discuss the contractor's current process for qualifying LWO engineers and assigning systems engineers. The parties conceptually agreed on the need to clarify systems engineers' responsibilities, that gaps exist in the current training process, and the need to focus training initiatives on new and reassigned systems engineers. Gaps included training on the codes and standards applicable to the system, system design, system condition, and system vendor information. The contractor will also develop a process for how to address existing systems engineers. The improvements discussed would apply to all LWO facilities. In addition, a System Performance Monitoring Plan was issued to define the application of system performance monitoring requirements for F-Tank Farm systems that are needed for long-term operation and those destined for closure.

Interim Salt Disposition Project: The transfer of filtered solution to the Modular Caustic Side Solvent Extraction Unit (MCU) was held up until the decontaminated salt solution coalescer filter could be replaced. After this transfer occurred Thursday night, a siphon formed and 547 gallons of salt solution were siphoned from the MCU receipt tank back to 512-S before operators closed valves at both facilities to stop the transfer. Engineers suspect that the two ¼" siphon break holes in the receipt tank downcomer are not working as designed, possibly due to plugging. The Site Rep observed operators break the siphon Friday afternoon by establishing an alternate vent path. Over the weekend, the salt solution at MCU will be processed in order to reduce the receipt tank dose rates. Next week, a boroscope will reinspect the condition of the siphon break holes. An inspection in February 2007 found one of the holes to be in good condition. Although 5 transfers were successfully made with the other receipt tank during startup, this is the first time this particular receipt tank has been used since it had a temporary modification during the readiness reviews.

Emergency Preparedness: The Site Reps observed a site training drill that simulated the collision of a fuel truck with another truck transporting low-level radioactive waste. Trying to address criticisms about past drills, simulation was kept to a minimum for the incident scene setup and fire department response. This was the first time the Site Rep observed the Fire Department actually lay hose and spray water and foam for an on-site drill. This real play revealed problems because the first attempts to spray foam quickly failed until the system was bypassed to allow the use of another source of foam. While a number of improvement items were identified, the response did not exhibit the major weaknesses seen in previous large-scale emergency preparedness drills.

Another recent event illustrates the aging infrastructure of emergency equipment. The only ladder truck at SRS to fight multi-story fires is an 18-year old one. Recently, this truck was unavailable to respond for 18 days because a cylinder had to be repaired out-of-state and then the truck suffered a mechanical breakdown on the way back and had to be towed to SRS. While SRS had access to a shorter ladder truck via a mutual aid agreement, the Site Rep questioned the adequacy of this considering the time it might take for the volunteer fire department to transport it to SRS and get uncleared firemen and an off-site vehicle through possibly two security gates (i.e., if it was responding to a limited area). The Fire Department agrees that it would be a good idea to bring this standby truck onsite during a drill to work out logistics since this has not been demonstrated before.