DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 10, 2012

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 August 10, 2012

Solid Waste Management Facility (SWMF): SWMF personnel are repackaging high dose rate TRU waste in Cell 11 (see 7/13-8/3/12 reports). SWMF personnel moved the third of the potential casks into Cell 11 for remediation; however, the cask contained a bag that was so long that it could not be lifted without being taken above the top of the hut. The contents were also too large to be placed in a fifty five gallon drum. This cask has been set aside for processing in F or H area. SRNS suspended work on the next cask since galling of a closure bolt precluded removal of the top until maintenance applied anti-seize. SRNS will resume remediation next week.

H-Canyon: DOE authorized SRNS to begin dissolution of vulnerable Sodium Reactor Experiment and associated high aluminum spent nuclear fuel. While H-Canyon processed unirradiated fuel in recent years, the last cask of irradiated fuel was received in December 2003. SRNS shipped a fuel cask from L-Area to H-Canyon and placed it inside the railroad tunnel. SRNS charged the first fuel bundle in the dissolver on Friday. In general, conduct of operations was good. Crane operations were very controlled, even during some tricky maneuvers. The implementation of the transient combustible specific administrative control was noticeably improved from last week's dry run. While a number of delays and issues were encountered, the DOE and contractor response was methodical and conservative. For example, the clearance between the bottom of the fuel bundle and the hot canyon cell covers was very tight, even when the hook was raised to its upper limit. When the crane operator initially tried to move the bundle to the dissolver, the bottom of the bundle was unable to clear the raised edge of one of the cell covers. After analyzing the hazards and modifying the procedure, the crane operator put the fuel bundle back into the cask, relocated some cell covers that were not fully seating, and verified a clear flight path before charging the bundle in the dissolver. The condition of the cell cover piers and the positioning of the covers on top of the piers may have contributed to the covers sitting askew. SRNS self-identified weaknesses in the pre-job briefs and either redid the weak portions or is taking corrective actions to improve them. One example of a conduct of operations issue was that an operator applying a key control lock on a derailer got a few steps ahead of the procedure reader and second person verifier.

Recommendation 2012-1 *Savannah River Site Building 235-F Safety*: The site reps performed a field observation of Building 235-F with several members of the team designated to prepare the implementation plan. While it is clear that this team intends to perform significant activities, the lack of an approved Basis for Interim Operations precludes much meaningful work from being accomplished in the facility at this time.

K-Area: SRNS maintenance personnel noticed that the color of the grease that was in the electric fire pump did not match the color of the grease that was designated to be installed. The maintenance personnel halted the job until the issue could be resolved and the pump was restored to its original configuration. While the pump retains the same ability to provide water it was declared inoperable until the issue is resolved.

Nuclear Materials: Several facilities hold, receive, or ship small "robust" sample containers of plutonium oxide. Recent studies in support of upcoming missions call into question the ability of these containers to be able to hold the expected pressure should they be exposed to a major fire. Should they be over pressurized the material that is released could increase the airborne release fraction. Based upon these studies SRNS declared a Potential Inadequacy in the Safety Process (PISA).