DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 6, 2016

TO: S. A. Stokes, Technical Director
FROM: Z. C. McCabe, Site Representative
SUBJECT: Savannah River Site Weekly Report for Week Ending May 6, 2016

F-Area Potential Inadequacy in the Safety Analysis (PISA): A recent review by F-Area Nuclear Materials Control and Accountability (NMC&A) identified legacy solvent recovery filters with hold up of a significant amount of fissile material that are not considered in the current facility safety basis. The filters were removed from service and placed on a storage pad outside the facility in 2004. According to NMC&A, four of the six filters were subject to a nondestructive assay (NDA) analysis prior to storage on the pad, but the results were never included in the facility safety basis. The holdup material in the remaining two filters is believed to be negligible, but this has not been confirmed. Because of this information, SRNS declared a PISA.

F-Area personnel were initially informed last Thursday of the filters containing fissile material on the storage pad. At first they were unsure of the validity of the NMC&A data, and therefore did not implement compensatory measures until Tuesday when the PISA was declared. These compensatory measures include prohibiting vehicles on the pad and restricting additional fissile materials. The filters will remain on the storage pad until SRNS can determine a safe path forward.

K-Area: During a pre-job brief for a container surveillance in the K-Area Interim Surveillance (KIS) Vault, a K-Area engineer questioned a change in the procedure prerequisites that seemingly reduced the number of individuals required to perform a verification for a criticality safety requirement. The revised procedure did not clearly include the intended requirement for three individuals to independently ensure the shipping package ID and contents met the KIS vault requirements. The previous revision included a prerequisite step to record the information to be performed by an unspecified individual and a separate verification step to be initialed by two separate engineers designated "Eng 2" and "Eng 3." The current revision had two engineers designated "Eng 1" and "Eng 2" perform both the recording and verification. K-Area Operations placed the procedure on administrative hold until it can be revised to clearly include the criticality safety requirements.

K-Area personnel identified multiple factors that led to the ambiguity during an issue review, including an unclear understanding of the criticality safety requirements, multiple changes to a procedure included in a single procedure change request, and a less than adequate review of the changes. Furthermore, some previous versions of the procedure did not clearly include the requirement. For example, the unspecified individual mentioned above could have been "Eng 2" or "Eng 3" and signed in multiple locations in the same procedure. The corrective actions include an extent of condition review to determine if the criticality safety requirement was implemented correctly in past iterations of the procedure, a revision of the procedure that will clarify that three individuals are required to implement this criticality safety requirement, and a site-wide lessons learned.

H-Canyon: SRNS personnel began a Readiness Assessment of H-Canyon First Uranium Cycle Solvent Extraction Process (1st U) and Head End. While starting up 1st U, H-Canyon personnel began experiencing equipment issues with two of the three variable frequency drives (VFDs) that control the motors for the three mixer-settler banks in 1st U. H-Canyon personnel are troubleshooting the VFDs. The RA has been postponed until the issues with the VFDs are resolved.