

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 12, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
J. J. McConnell, Deputy Technical Director
FROM: J. S. Contardi SRS Site Representative
SUBJECT: SRS Report for Week Ending November 12, 2004

The site rep. was out of the office on Thursday and Friday. Staff member Dan Ogg was onsite for a review of transuranic waste operations.

Tank 12 Sludge Removal: Tank 12 contains approximately 138,000 gallons of sludge and 65,000 gallons of salt cake. The waste is currently dry and no appreciable liquid additions have been introduced in thirty years. Tank 12 is a Type I tank and has numerous leaks sites. The lowest known leak site is located 93 inches from the bottom of the tank. The tank does not meet modern requirements for secondary containment, but does have a 60 inch secondary pan. The Westinghouse Savannah River Company (WSRC) has performed an engineered evaluation to determine the amount of liquid needed to adequately re-wet the waste. Up to 35,000 gallons will be necessary to establish a stable 6 to 10 inch liquid layer over the waste, which will raise the waste level to 85 inches above the tank bottom. To mitigate any new waste leaks into the annulus, equipment has been staged at the tank top to allow waste transfers from the tank annulus back into Tank 12.

Contractor operators plan to make inhibited water additions from a tanker truck through an above ground transfer hose. Each tanker truck can introduce up to 4,500 gallons. Prior to the additions, a leak test was performed on the transfer path. The initial leak test indicated that the transfer line was not holding pressure despite the introduction of more than 1,200 gallons. The leak test was suspended and the valve alignments were visually re-verified. No liquid was observed around the transfer path, which would indicate that the liquid was being deposited into the tank. A second leak test confirmed that the liquid was flowing into the tank. The root cause of the inadvertent transfer was an improperly installed ball valve.

Building 235-F Future Missions: Earlier this week, the Department of Energy Savannah River Operations Office (DOE-SR) directed WSRC to suspend a portion of the 3013 Container Surveillance and Storage Capability project for Building 235-F. DOE-SR also directed WSRC to develop a pre-conceptual estimate for installing the 3013 surveillance capability in 105-K. In addition, WSRC was requested to develop an estimate for installing 3013 storage racks in 105-K as well as other related operations to support the requested mission changes (e.g., waste handling and ventilation upgrades). The change in direction was driven by the new requirements resulting from the revised design basis threat guidance. The Board's report to Congress concerning plutonium storage at SRS identified numerous potential deficiencies with long term storage of plutonium in Building 235-F and may have contributed to the decision to relocate the aforementioned missions to Building 105-K. The change in direction does not affect the Limited Extent Surveillance (LES) project which is expected to be completed early next year in Building 235-F. The LES project is necessary to provide a near term surveillance capability once FB-Line is deactivated.