

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending July 8, 2005

Work Planning: The site contractor has completed the pilot phase of the revised work planning process (Site Rep. Weekly 1/7/05). The Defense Waste Processing Facility, F-Tank Farm, and the Site Utilities Division invoked the revised process during the pilot phase. To date, more than 900 workers have been trained and approximately 1000 assisted hazards analyses have been generated. In general, feedback from the work force has been positive, but several changes are expected to be made before implementation across the site. Formal assessments of the pilot program will be completed by the end of the month followed by site wide implementation beginning in August.

94-1 Nuclear Material Processing: As stipulated in the latest revision of the 94-1 Implementation Plan, processing of plutonium metal residues will be completed by September 30, 2005. To ensure completion of this milestone, the contractor will utilize the F/H Area Laboratory for process flow sheet validation. Approximately 8 metal items will be dissolved and analyzed using a bench scale process within a glovebox. The resulting solutions will be transferred to HB-Line for disposition. A contractor readiness determination was recently completed with one pre-start and seven post-start findings. The Savannah River National Laboratory has already begun similar operations.

H Area: When the H-Canyon Low Activity Waste (LAW) Feed Tank feeds material to LAW Evaporators 7.6E and 7.7E concurrently, the feed tank's total uranium-235 mass is added to both evaporators gram total as a conservative measure. A loss of one criticality safety control occurred recently when material was being fed to both evaporators, but the feed tank's U-235 mass was only added to the 7.7E evaporator's gram total. When this was discovered two hours later and the gram total was adjusted, it was identified that the gram total in the 7.6E evaporator exceeded the evaporator's mass limit. This assumes the entire contents of the feed tank were fed to that evaporator although in reality the gram limit was not physically exceeded. Apparent causes for this event were inadequate shift turnover and communications, procedure issues, and conduct of operations. In light of this and other recent events, all activities in H-Canyon were shut down other than those required for safety or authorization basis compliance. The shutdown is the second time in a month H-Canyon processing has been suspended due to criticality violations and conduct of operations concerns (Site Rep. Weekly 6/10/05).

A review of the basis and implementation of all facility criticality controls is underway. Other corrective actions include additional training, level of knowledge testing, and increased oversight. The Independent Corporate Assessment of the H Completion Project also commenced this week. The team is focusing on work planning, conduct of operations, feedback and improvement, line management, and the criticality safety program.