DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 18, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi, SRS Site Representative
SUBJECT: SRS Report for Week Ending February 18, 2005

Savannah River National Laboratory: As a result of metal processing in Building 773-A Section D of the Savannah River National Laboratory (SRNL), a small fire developed in a metal trash can. The operator was able to extinguish the fire manually and no injuries occurred during the event. The purpose of the metal processing was to determine the suitability of graphite as a lubricate. The metal processing required use of nickel, aluminum, and graphite powders with a zirconia grinding media. Upon completion of the work, the alloyed powders were disposed of in the metal trash can. Wipes wetted with water and ethanol were used to clean laboratory equipment and were disposed in the same metal trash can. Trace quantities of lanthanum powder from an unrelated experiment were also disposed in the trash can. Approximately ten minutes following the addition of the wet wipes to the trash can a fire was initiated. The fire triggered the fire alarms, however, the fire department response was hampered due to arriving at the wrong security gate. Personnel working in Section D were evacuated upon fire alarm activation. Due to migration of smoke, individuals in Sections B and C were also relocated.

Initiation of the fire is believed to be due to a pyrophoric reaction of the metal powders. Work planning documentation acknowledged the pyrophoric nature of the metals for the experiment. However, this hazard was not adequately addressed for waste disposition. Pending the results of an investigation, all metal processing has been suspended. The experimentation did not involve radioactive material nor were any radioactive materials stored in the room.

Work Force Restructuring: This week the Department of Energy (DOE) approved the work force restructuring plan proposed by the Westinghouse Savannah River Company (WSRC). Approximately 2,000 WSRC jobs will be eliminated during the next two years. Up to 1050 jobs will be cut by this summer, of which approximately 75 per cent will be salaried and the remainder hourly workers.

Salt Processing: Section 3116 of the 2005 National Defense Authorization Act provided specific requirements for the disposition of radioactive waste at the Savannah River Site. The legislation provides a framework to safely expedite the removal of salt wastes contained in the tank farms. Due to the tank space shortages, timely waste disposition is necessary such that adverse impacts to other vital site-wide processing operations do not occur. In December 2004, WSRC developed a plan to meet the stipulated requirements. However, DOE has yet to approve the proposed processing methodology. DOE's approval has now become the time critical step to low-curie salt processing. Continued delays could adversely impact the implementation of salt processing operations by placing undue pressure on startup activities.

H-Canyon Waste Processing: To reduce the effluents from H-Canyon to the tank farms, waste generated from processing unirradiated Mk22s will be dispositioned via the saltstone production facility (SPF). This week, a readiness assessment for including general purpose evaporator waste to SPF commenced.