DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 17, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi, SRS Site Representative
SUBJECT: SRS Report for Week Ending December 17, 2004

Transuranic Waste Processing: In response to the Board's December 14, 2004 letter regarding unvented transuranic drum processing, the Westinghouse Savannah River Company (WSRC) will assemble an independent team to evaluate the concerns raised in the Board's letter. Paul Rice will be the team leader.

H-Area Radiological Work Planning: Several potentially significant radiological events have occurred in recent weeks in HB-Line and H-Canyon. Several times in HB-Line the radiological work permit (RWP) suspension guidelines were exceeded. In all cases, the operators correctly stopped work and placed the work area in a safe condition. In H-Canyon, a radiological inspector performed work in which the radiological rates exceeded the RWP suspension guidelines, 25 rem/hr (extremity). A survey was performed by the inspector but was less than adequate and did not accurately quantify the radiation fields. From the work, the inspector received an extremity dose exceeding 1 rem. Historically, radiological work in H-Canyon has not resulted in significant extremity doses. Thus, extremity dosimeters were not required despite suspension guidelines of 25 rem/hr (extremity). For these events, numerous opportunities existed to identify and mitigate the hazards prior to commencement of work.

To address these concerns, WSRC management has submitted a letter to the Department of Energy that identifies corrective actions. Summarized below are several key corrective actions:

- A radiological stand-down has been initiated to review the recent events,
- Automated hazard analysis (AHA) subject matter experts will meet with work planners to evaluate the current AHA process,
- A radiological improvement plan will be developed to identify opportunities for hazard reduction.

Defense Waste Processing Facility: During the course of normal operations, several melter related components have degraded. Due to erosion concerns, WSRC has removed the bubbler style glass pump. The glass pump utilizes argon gas to increase mixing in the melt pool, which reduces the cold cap as well as pressure spikes. Pressure spikes may result in variable feed rates and can hamper glass throughput. WSRC is performing a cost benefit analysis to determine whether a new glass pump will be installed. Accumulation of glass along the canister insert can also affect pouring operations. Heated bellows have been used to mitigate glass accumulation. However, glass has accumulated within the heated bellows and negatively affected its functionality. Mechanical cleaning or replacement may be necessary. To date, 1764 glass canisters have been produced.