DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 27, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending May 27, 2005

Mark Sautman was at Hanford this week. Tom Burns was on site this week.

Evaporators: Currently, all three high-level waste evaporators are shutdown. The evaporators play a significant role in regaining vital tank space by concentrating waste. Equipment degradation and difficult waste transfer logistics, due to tank space limitations, have contributed to the shutdowns. Summarized below is a status of each evaporator.

- 2F – During operations on May 11, a leak was discovered in the back flush valve in Tank 37, which is the drop tank for the concentrated waste. The contractor will have to remove and repair the valve before the evaporator is restarted. Competing resources to support an unrelated jumper replacement may prolong the shutdown. However, once 2F is restarted a lack of available feed may force another shutdown unless future waste transfers can be accelerated.

- 2H – In response to low flow rates during a pot evacuation surveillance, the contractor shutdown the evaporator on April 19. Chronic degradation in pot evacuation flow rates indicates significant accumulation of scale may be present. The contractor has mechanically cleaned the gravity drain line from the evaporator pot to the drop tank. Another inspection will be conducted to determine the extent of scale and solids deposits within the evaporator pot. The contractor anticipates restarting the evaporator by the end of May. Chemical cleaning of the pot and associated equipment is expected to occur during the next outage which may last several months.

- 3H – The evaporator has not operated since March 28. Heat transfer restrictions in the drop tank have historically reduced the availability of 3H evaporator. The contractor has initiated a salt removal campaign from the drop tank to alleviate the heat transfer limitations. The evaporator is expected to be shutdown until the salt removal is completed in early Fall.

The poor evaporator availability and tank space shortages highlight the need for near-term salt processing capabilities.

Transuranic Waste Processing: This week, the contractor concluded a readiness assessment (RA) for repackaging transuranic waste stored in Black Boxes. Size reduction and repackaging operations will take place in the H-Canyon truck well. The RA identified no prestart findings and four post-start findings. The RA proceeded at risk pending resolution of Department of Energy comments regarding the contractor approved hazard analysis. The contractor will conduct a separate readiness review at the Solid Waste Management Facility for operations necessary to ensure the containers do not contain explosive atmospheres.