DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 10, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending March 10, 2006

DNFSB Activity: This week, the Board's Technical Director, Kent Fortenberry, was onsite for a working group meeting regarding salt processing activities.

HB-Line: This week, HB-Line personnel declared a Potential Inadequacy in the Safety Analysis (PISA) for Phase I dissolving activities. The PISA is a result of discrepancies between safety documentation and as-built equipment configuration. The current Double Contingency Analysis (DCA) credits a heater block cover with preventing fissile material from accumulating in the heater block which the dissolver rests on. Facility personnel believe the heater block cover was removed during startup testing to increase heat transfer from the heater to the dissolver vessel. Neither the engineered drawings nor the DCA was updated to reflect the installed configuration. Phase I was not operating at the time due to previously identified DCA deficiencies (see Site Rep. weekly 3/3/06) and will not resume operations until the DCA deficiencies are resolved. Facility personnel have placed additional restrictions on dissolver vessel and heater block maintenance.

While stabilizing plutonium sweepings in a glovebag, several room air samplers alarmed due to high activity. The operators, who were wearing two pairs of protective clothing and a fresh air hood, stopped work and exited the room. Followup surveys indicate that the seal around an inlet filter may be leaking. The glovebag was fabricated onsite and incorporated a round port for the filter housing. However, the filter used in the glovebag was square which resulted in excess sleeve material around the filter. A new glovebag is being fabricated which will incorporate a square filter port.

Defense Waste Processing Facility (DWPF): The Site Rep met with the Chief Engineer to discuss how systems and shift technical engineers (STE) are trained and qualified. Unlike other site facilities, DWPF does not provide system-specific training courses besides a facility and safety envelope overview. DWPF shift technical engineers are not credited in their safety basis and do not receive the practical and operations-orientated training that some other site STE's or shift technical advisors (STA) receive. The Site Rep plans to meet with DWPF operations staff to better understand who handles the traditional STA roles at DWPF.

Saltstone: Because the grout pumping system's pulsating nature was causing a rupture disc to prematurely activate, the contractor applied ASME Section VIII code case 2211 methodology to provide overpressure protection by system design (i.e., pressure interlocks). Even though the interlocks can quickly shut down the pump, it was identified this week that unacceptably high pressures could still result after the interlock was triggered. The contractor then added additional process controls until the revised fault tree analysis calculated a 9E-6/year accident frequency. The start of the Readiness Assessment has been delayed until March 20.