

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 6, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending October 6, 2006

Tritium Extraction Facility: All 44 pre-start corrective actions from the contractor Operational Readiness Review (ORR) have been closed. The Savannah River Site Office (SRSO) requested that the contractor demonstrate four activities prior to their determination of readiness to operate. SRSO also said that the acceptability of the performance of the tritium air monitor system needs to be analyzed. Furthermore, the SRSO Manager stated that it was their expectation that a limiting condition of operation entry would be an exception and not a normal or expected condition. Finally, a Potential Inadequacy of the Safety Analysis (PISA) will likely be declared because the oxygen limits for argon atmospheres might have to be lower than those for nitrogen atmospheres.

H-Canyon: Although sodium nitrite was added to the 1st Cycle waste stream in accordance with the neptunium processing Specific Administrative Control, sample results indicate that the actual amount of ammonium destroyed was significantly less than anticipated (based on literature data). Nitric acid in the waste stream may have reacted with the nitrite prior to the evaporation step, reducing the amount of nitrite available for ammonium destruction. Processing was suspended prior to waste neutralization and a PISA was declared. The safety concern is the amount of ammonium that could deposit on process vessel vent filters. In addition, an electrical malfunction triggered a false Nuclear Incident Monitor alarm this week. Engineers are working to resolve both issues.

Saltstone: This week, the contractor conducted the first grout run since the system plugged in late August (Site Rep weekly 9/1/06). The system operated for approximately 1.5 hours before being terminated by the shift manager due to abnormal flow indications.

Savannah River National Laboratory: A radioactive particle was found in a worker's hair although a hood was being worn. An extensive investigation could not establish a definitive cause for this contamination event. The first critique suffered from the lack of key participants and survey information, but facility management recognized this. A second critique was held and corrective actions were developed for improving the rigor of future critiques.

Field Observations: The Site Reps observed workers decontaminate the canister mechanical manipulator stand inside the canister decontamination maintenance cell at the Defense Waste Processing Facility. The Radiation Work Permit's suspension guidelines had recently been significantly reduced to bring them closer to the expected radiological conditions. (See 8/18/06 weekly report). Actual contamination levels were higher than expected based on past experience and work had to be suspended until the radiological controls were reviewed again, new suspension guidelines established and the necessary approvals granted. The Site Reps also walked down all of the F/H Laboratory labs that handle radioactive material and watched the Tank 50 telescoping transfer pump being raised to a higher elevation.