

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 25, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** J. S. Contardi/M.T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Report for Week Ending May 25, 2007

M. Sautman was offsite this week.

**Modular Caustic-Side Solvent Extraction Unit (MCU):** Two recent operational events have further delayed startup testing. Following maintenance on a contactor, the system configuration was not properly restored which led to an unexpected increase in the strip effluent decanter tank. A review of the system alignment revealed two valves which were in the wrong position. During a subsequent process run, the differential pressure across the decontaminated salt solution coalescer unexpectedly increased. Further analysis determined that the coalescer was plugged by particles of iron oxide and sulfate salts. Two tanks used in MCU were previously used for storage of ferrous sulfamate in F-Area. Although the tanks had been cleaned before reuse in MCU, the contractor believes some residual ferrous sulfamate may be leaching from the tanks. The contractor has developed a path forward which includes additional cleaning of the tanks, a temporary modification to allow processing while the tanks are cleaned, and a permanent modification for acid cleaning of the coalescer.

**H-Canyon:** During operation of the second uranium cycle, the set point for a neutron monitor was exceeded and the associated interlock activated to stop the feed stream and isolate steam to the system. The neutron monitors are boron trifluoride proportional counters. Based on information presented at a critique, the contractor believes the high count rate was a result of operating the monitors at voltages which can lead to leakage currents and spurious counts.

This week, a training drill for the site annual emergency preparedness drill was held at H-Canyon. The scenario involved a coil and tube failure within a canyon vessel and an injured worker who was also contaminated. In addition, a first responder simulated a heart attack while responding to the event. The Site Rep observed activities at the incident scene.

**Tritium Operations:** The Site Rep walked down the storage area for returned tritium reservoirs and hydride storage vessels. In addition, the transportation path for material movements was also observed including the unpacking of shipping containers. Combustible loadings were minimal and no deficiencies were observed.

**K-Area Interim Surveillance (KIS):** DOE concluded their Operational Readiness Review for KIS. The DOE team identified six pre-start findings and four post-start findings. The first surveillance is expected to commence during the first week of June.

**Emergency Management:** DOE has amended the Request for Proposals for the Management and Operations contract to include the Emergency Management function (Site Rep weekly 4/27/07). The amendment includes a provision to remove the Emergency Management portion at a later date.