

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 13, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** J. S. Contardi/M.T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Report for Week Ending April 13, 2007

**Solid Waste Management Facility (SWMF):** Headspace gas analysis found ~7% hydrogen (H<sub>2</sub>) in one transuranic (TRU) waste drum and acceptable levels in a second drum. Because these H<sub>2</sub> concentrations were mistakenly swapped, the high H<sub>2</sub> drum was handled without the required Justification for Continued Operations controls. Those controls, however, were used for the safe drum. Facility personnel identified the discrepancy after evaluating additional headspace gas results for the two drums. A critique was held and the appropriate corrective actions identified. The Site Rep also walked down several operations at SWMF including TRU waste drum repackaging and observed the subsequent real-time radiography of the high H<sub>2</sub> drum.

**H-Canyon:** Three significant operational events occurred recently. First, although the set-up and transfer procedures were performed as written, an inadvertent transfer almost occurred because an error in the set-up procedure led to a jumper being installed on the wrong steam nozzle. Luckily, there was a blank on the out-of-service jet discharge. This mistake was missed by multiple individuals during the procedure approval and execution. Management is treating this as a serious near miss. Second, the calibration port of a differential pressure transmitter used on a transfer line was not properly capped after it was calibrated last month. This allowed ~3 gallons of low enriched uranium solution to discharge out the opening before a nearby operator shut down the transfer. In the third event, a suspended wood crate, which a crane had removed from a black metal box, started to separate while it was being rotated. Work stopped before any contamination was released, and the use of ratchet straps and additional screws allowed the crate to be safely moved later.

**Salt Waste Processing Facility:** During offsite testing, ~30 gallons of caustic solution overflowed from a tank because a 3-way valve was aligned to the wrong tank. The test engineer was not using the Pre-Operational Safety Checklist for the valve lineup, but an unapproved checklist. Furthermore, the level alarm setpoints were below the operating level, causing the high level alarms to already be locked in when the transfer started. Finally, when rising solution flooded the level detector, it erroneously indicated that the level had dropped 20 inches. Management is reviewing the conduct of operations and instrumentation issues for testing and design implications.

**Department of Energy-SR:** The Performance Assurance Council will now provide independent oversight of the technical qualification status of DOE personnel. (See 3/16/07 report). The Site Rep discussed potential concerns with DOE Operational Readiness Review team activities concurrent with the contractor K-Area Interim Surveillance ORR. DOE only approved corrective actions this week for a facility representative program self-assessment that was conducted 7+ months ago.

**Liquid Waste Operations:** Simulant testing at the Modular Caustic Side Solvent Extraction Unit was suspended because sodium aluminosilicates precipitating from the simulant were plugging the coalescer (See 4/06/07 report). Saltstone operations restarted this week, but were limited to processing leachate pumped from the Saltstone vault.