

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 11, 2008

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** M. P. Duncan and M. T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Weekly Report for Week Ending April 11, 2008

M. Sautman was offsite this week.

**K-Area Complex:** The Site Rep observed two operations at the K-Area Complex: transportation of Super Kukla material from the material storage area to a truck for shipment to H-Canyon and operations to perform gamma spectroscopy of samples generated from destructive examination activities of a 3013 container in the K-Area Interim Surveillance vault. Both operations went well and no deficiencies were noted.

**Interim Salt Disposition Project:** DOE-SR updated the Tank Farms Authorization Agreement to allow the contractor to begin hot operations at the Actinide Removal Process and the Modular Caustic-Side Solvent Extraction Unit.

**Plutonium Disposition Project:** On Friday, DOE-SR planned to request approval for a revised CD-1A (Critical Decision) for the Plutonium Disposition Project and to roll a scaled-down 3013 Container Surveillance and Storage Capability Project into the Plutonium Disposition Project. The existing plan was to send 4.1 metric tons (MT) of plutonium to the future Mixed Oxide (MOX) Fuel Fabrication Facility, process 2 MT through H-Canyon, and vitrify the remainder at the K-Area Complex. Under the proposed plan, the amount converted to MOX would increase to 7.8 MT and plutonium vitrification at the K-Area Complex would be eliminated. The remaining 5 MT would be sent to H-Canyon and HB-Line for processing, mixed into high-level waste sludge batches at the Tank Farms, converted to glass at the Defense Waste Processing Facility, and sent to the future federal repository.

The proposed approach would establish a stabilization and repackaging capability compliant with DOE-STD-3013. It also includes an upgrade to the K-Area Interim Surveillance vault's ventilation system from safety-significant to safety-class and includes a safety-class ventilation system for a new 3013 storage area. Also of note, the old plan would have increased the K-Area Complex's capability for performing surveillance on 3013 containers from 15 destructive and 40 non-destructive examinations per year to 40 and 100 per year. This enhanced capability would be eliminated under the new plan. The modified project's estimated startup date would be the 3<sup>rd</sup> quarter of FY2014 with total project cost estimated to be between \$300 and \$500 million.

**H-Canyon:** At the H-Canyon Outside Facilities, a construction worker's personal clothing became contaminated (4000 dpm alpha, 60,000 dpm beta-gamma) when he came into contact with a wet spot that allowed contamination to pass through his anti-contamination clothing. The source of contamination is likely some liquid spilled from pipe line breaks that were performed the previous day; however, other sources could not immediately be ruled out as there is widespread contamination in the area (non-transferable) that may become mobile when wet.

**HB-Line:** Operations commenced in HB-Line to process plutonium-contaminated enriched uranium oxide from Lawrence Livermore National Laboratory.