

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 9, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** M.T. Sautman, SRS Site Representative  
**SUBJECT:** SRS Report for Week Ending November 9, 2007

**Transuranic (TRU) Waste:** DOE approved a significant increase in the plutonium-equivalent curies (PEC) allowed for shipments of TRU drums between the Solid Waste Management Facility and F-Canyon. A Management Assessment was conducted to review the new controls to deal with the increased source term. In light of this, the Site Rep questioned the appropriateness of using a drill that was primarily a first aid case since there would be no simulated drum breach and thus only minimal contamination (i.e., 200 dpm/100 cm<sup>2</sup> α) was assumed. Minutes before the drill initiated, the contractor decided to raise the contamination levels first to 10,000 and then to 100,00 dpm/100 cm<sup>2</sup> α. The FEB later questioned whether the radiological data was realistic for the bounding drum. The Site Rep had previously questioned the arbitrariness of radiological data used in these drills (see 8/10/07 report). A subsequent ground deposition model indicated that contamination levels within 100 feet of a worst case, breached high PEC drum were actually in the 10's to 100's of million dpm/100 cm<sup>2</sup> α range - several orders of magnitude higher than that used in previous drills. The Area Manager and Facility Evaluation Board (FEB) also questioned whether the Fire Department had adequately stabilized the spill scene because the tarp covering the drums and bags was flapping in the high winds. A table top will be conducted next week to identify better methods for stabilizing a spill scene in light of the above results.

The Site Rep observed workers safely respond to rusty drums of transuranic waste that were found floating inside an old concrete culvert partially filled with highly contaminated rainwater.

**Tritium:** In response to Site Rep comments, the tritium facilities' Corrective Action Review Board charter was revised to require subcommittee approval of the proposed list of corrective actions for significant events before implementation rather than just reviewing them later on.

An independent contractor review of the Tritium Extraction Facility's ventilation system recommended revising the functional requirements to ensure a global system response to failures. The current failure scenario-based approach only focuses on single-point failures.

**Tank 48:** Based on the calculated unmitigated radiological consequences, the Conceptual Safety Design Report for the hazard category 2 Fluidized Bed Steam Reformer Facility did not identify any Safety Class or Significant controls. The existing facility is equipped with non-safety related ventilation and fire protection systems that are Performance Category 1.

**Maintenance:** A good Maintenance Planning Guide has been developed to standardize the format and content of maintenance work instructions. (See 7/13/07 and 7/27/07 reports).

**Regulatory Monitoring and Bioassay Laboratory:** The database file used to ensure all chemical and radionuclide materials remain below the Auditable Safety Analysis maximum inventory limits became completely corrupted. Unfortunately, this corrupt file was automatically saved as the backup file before the corruption was identified. A physical inventory is ongoing.