

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 2, 2006

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** J. S. Contardi/M.T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Report for Week Ending June 2, 2006

**Glass Waste Storage Building #2:** The Department of Energy Operational Readiness Review commenced this week. Mr. Linzau was onsite to assist with the oversight of this review.

**K-Area Interim Surveillance (KIS):** The project will serve as a temporary means of performing destructive evaluation of DOE-STD-3013 containers until the Container Surveillance and Storage Capability project is completed. During a recent walk down, the Site Rep questioned the structural adequacy of an unused ventilation duct that was located outside of the KIS processing room, but within a Performance Category (PC-2) portion of the facility. The contractor subsequently determined that this duct does not meet PC-2 requirements and is now developing a path forward to determine if the duct needs to be removed or if seismically qualified supports can be added.

**Transuranic Waste:** Black boxes of transuranic waste are being shipped from the Solid Waste Management Facility (SWMF) to H-Canyon to be repacked into Standard Large Boxes (SLB) and then returned to SWMF. Original assay data is relied upon until SWMF assays the SLBs afterwards. Unexpectedly high plutonium (Pu) activity was found this week when SWMF assayed the first SLB that it received from H-Canyon. Preliminary assay data using different techniques indicate that this SLB may have exceeded the Pu-equivalent curie limit in the H-Canyon Black Box repacking consolidated hazards analysis. Furthermore, this SLB may contain hazard category 2 quantities of Pu although it is currently stored in a hazard category 3 facility. Since other facilities storing these repacked boxes may have similar issues, those facilities have been placed in standby and black box shipments have been suspended. Over the last two years, there have been a number of cases where inaccurate assay data has resulted in facility hazard category limits, technical safety requirement, and/or criticality requirements to be exceeded. (Site Rep weekly reports 5/19/06, 2/3/06, 7/30/04). The focused extents of condition corrective actions for previous events have not resolved this issue because each new case involves a slightly different scenario (e.g., container, assay equipment, etc.) and waste containers continue to be transported using old assay data.

**Tank 804 Cleaning:** Contractor management decided that the process for removing Pu-contaminated sludge will be mocked up using the prescribed personnel protective equipment and that the mockup will be videotaped. This is a positive decision. (Site Rep Weekly 5/19/06).

**H-Canyon Outside Facilities:** Routine radiological surveys found localized high dose rates (90 mrem/hr and 60 mrem/hr at 30 cm) on two tanks used for the high enriched uranium blend down project. A gamma analysis was performed and Cobalt-60 (Co-60) was determined to be the predominate radionuclide. The contractor believes the Co-60 was released as a corrosion product from one of the dissolvers in the canyon. A path forward was developed to mix the tank in the hopes of dispersing the material, which had accumulated under the inlet for each tank. However, after more than an hour of mixing the dose rates had not moved or dissipated. The contractor is currently evaluating additional options to disperse the material.