

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 2, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending February 2, 2007

K-Area Material Storage: Due to a breakdown in the conduct of engineering, the calculated frequency of a fire-related plutonium eutectic event may actually be extremely unlikely (EU) rather than beyond EU. A fundamental assumption within the calculation was not documented as required. In addition, an independent verification of the calculation was not documented nor was the method of verification properly documented within the calculation.

HB-Line: The Site Rep observed operators divide small plutonium/molybdenum metal pieces into cans for subsequent dissolution. The operators performed the job adequately, but were hindered at times by the poor lighting in the glovebox and a legacy piece of equipment which got in their way. The Site Rep also observed an undocumented cracked glass glovebox panel. The cause of the crack appeared to be a nearby temporary air monitoring line with a metal 90 degree elbow.

F/H Laboratory: The Site Rep walked down the contamination hut being used for the repair of the leaking high activity waste drain. Facility documentation indicates that the portion of the line containing the leak is either stainless steel or hastelloy. The waste header is contained in a below grade stainless steel trench which has become heavily contaminated from the leak. The trench covers have been removed and activities to reduce and fix the contamination are being pursued.

F-Canyon: After repacking a transuranic (TRU) waste drum in F-Canyon, a worker removed a rigid drum liner lid that had fallen inside the original drum. Alpha contamination levels were extremely high inside the drum because the waste had not been contained inside plastic bags. Despite significant ventilation, an air sampler located near the dumper recorded the equivalent of 13,300 derived-air-concentration hours (DAC-hr), which exceeded the radiation work permit's suspension guide of 400 DAC-hr. Although high contamination was found on some of the worker's anti-contamination clothing, they were wearing fresh air hoods and preliminary results do not indicate that any uptake occurred. The project modified their process so that liner lids will simply be disposed as TRU waste and drum surveys will be performed using the enclosure gloves. The Site Rep observed workers implementing the corrective actions in F-Canyon.

Solid Waste Management Facility: In order to accelerate TRU waste drum venting, the contractor is considering eliminating all drum purging and handling drums with headspaces below 8% hydrogen with minimal controls. The Site Rep reviewed a response plan for venting two bulged drums and forwarded some questions regarding facility worker hazards.

Rec. 02-3: The Site Rep noted that the current wording of the tank farms specific administrative control (SAC) on waste acceptance criteria (WAC) and the Effluent Treatment Project (ETP) WAC can lead to a violation of the WAC and SAC even though the ETP safety basis is not threatened. The contractor is considering clarifying the requirements to preclude this.

Sealed Source Movement: The Site Rep observed riggers successfully place a transfer shield, containing a highly radioactive Co-60 source, into a Type B shipping container.