

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 14, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending April 14, 2006

H-Canyon: While swapping jumpers with the old hot canyon crane, festoon cables dangling from the crane tipped over a failed evaporator column (~13' high, 9200 lbs.) and its lifting yoke that were stored on a nearby cell cover. The column and yoke then fell into an open, adjacent cell and landed on the Sump Receipt Tank six feet below, impacting three jumpers. While the mockup, planning, and pre-job briefing were thorough, the Site Rep pointed out to facility management that the procedure prerequisites did not fully reflect everything that was planned. The final work instructions included an expanded list of prerequisites. While it was difficult to get a choker around the column, the removal of the column from the cell went smooth. Inspections have found little damage so far.

Inattention to detail resulted in two procedure errors during the dissolution of plutonium scrap material. Although they were still waiting for uranium sample results to confirm that the previous dissolver run had dissolved, the operator, an independent verifier, and the first line manager (FLM) used data from another dissolver run to incorrectly state that this had been verified. This violation of a nuclear safety control was identified when the oncoming shift reviewed the data. Earlier in the process, an extra ~1300 lbs. of recycle water was added to the dissolver. This weight is later used in a nuclear safety control calculation. This mistake was also missed by the independent verifier, but was caught during the FLM's verification step. In light of the above events, most operations were suspended by the contractor at H-Canyon. Furthermore, the Department of Energy (DOE) sent the contractor a letter expressing their concern with these three events in light of all the corrective actions implemented last summer. DOE further stated that they cannot accept any substandard level of performance in nuclear safety control and asked to be advised of corrective actions.

H-Area New Manufacturing: After verifying a laser shot hole was present on an empty unit, the operator put the unit down momentarily, but then mistakenly picked up a filled unit instead. The unit's contents were released into the glovebox when the stem was broken as part of the unloading procedure, which set off the room alarm. The secondary stripper system recovered the material.

Savannah River National Laboratory: While stabilizing acidic radioactive liquid with an absorbent in a capped plastic bottle, an unexpected reaction occurred in which the absorbent began to swell and gas generation was observed. To relieve the pressure, the laboratory technician unscrewed the cap at which time liquid flowed out of the bottle and onto the radiological hood's floor in which the operation was being performed. The technician performed a survey for contamination and then requested management support. Several additional individuals entered the laboratory to assess the situation and directed the technician to monitor at a PCM-1B. While monitoring at the PCM-1B, contamination was found on the technician's lab coat, at which time radiological control personnel help was requested. The failure to promptly notify radiological control personnel of the event could have resulted in a more significant event if the contamination had spread outside the hood (e.g., the laboratory floor).