

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 10, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi, SRS Site Representative
SUBJECT: SRS Report for Week Ending December 10, 2004

Transuranic Waste Processing: On Monday, WSRC suspended most transuranic (TRU) waste processing at the Solid Waste Management Facility (SWMF). During the course of the last several months, numerous potential inadequacies in the safety analysis (PISA) have been declared. Each of these PISAs has resulted in specific compensatory measures for various populations of TRU drums. One recent PISA, resulted in a positive unreviewed safety question for unvented drums which may contain explosive atmospheres. In addition, a vented TRU drum previously treated through the vent and purge process failed head gas analysis for flammable gas accumulation due to volatile organics. The drum developed a flammable atmosphere despite the previous purge evolutions. This finding calls into question the current safety basis assumptions regarding onsite drum movements.

A potential security concern with an additional population of drums has further hindered drum characterization efforts. With the limitations resulting from the aforementioned operational issues, WSRC decided that the safety posture of continued operations may be inadequate and placed TRU processing at SWMF in a standby mode. TRU waste shipments to SWMF will still be received but no further drum movements are allowed, unless the drum has already completed full characterization for shipment to the Waste Isolation Pilot Plant.

H-Canyon Waste Processing: Waste from unirradiated Mark-22 processing in H-Canyon will be dispositioned in the Saltstone Production Facility (site rep weekly 11/26/04). Following installation of jumpers, a pump and leak test were unsuccessful. Project personnel were unable to establish flow from the canyon to the pump. Troubleshooting determined that a valve was installed incorrectly. Despite the reconfiguration of the valve, flow to the pump still could not be established. A new path forward is under development to rectify the lack of flow. The readiness assessment has been delayed.

H-Canyon personnel are placing additional tanks in service to store material. The new tanks will allow continued storage in H-Canyon until the end of January 2005.

FB-Line Operations: De-inventory of FB-Line is approximately 75 per cent complete. At the current operational pace, FB-Line is expected to be de-inventoried by March 2005. Since bagless transfer operations began, more than 1200 DOE-STD-3013 containers have been processed. Recently, an increase in weld failures, has been noted and initial corrective actions have been unsuccessful. The test container produced in Lot 37 failed the visual exam during destructive analysis, but it did pass the leak test and the non-destructive analysis (i.e., radiography). Further analysis at the Savannah River National Laboratory indicated that a portion of the weld did not fully penetrate the lid bond. A path forward is being developed. The weld failure issue could also affect containers produced in Lot 38. If both Lots are affected, up to 50 3013's may need to be repackaged.