

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 26, 2010

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending November 26, 2010

H-Canyon: A crane operator repeatedly exhibited poor lifting techniques and missed several opportunities to take a “time out” when he encountered difficulties attaching the new warm crane monorail hoist hook to chokers wrapped around a bundle of size-reduced transuranic (TRU) waste. The operator attempted side pulls and repeatedly bottomed out the monorail hook, causing slack in the wire rope. Furthermore, the operator inadvertently engaged the hook on the part of the choker wrapped around the bundle, not the lifting part. This caused the choker to loosen rather than tighten when he raised the hook. As a result, one of the chokers slid off the waste bundle, causing it to fall back onto the floor and flip over. The operator only stopped when the cables became so crossed on the winding drum that the hook could no longer be moved. Workers later had to re-spool the crane cable.

A faulty stack monitor alarmed causing H-Area to implement a Remain-Indoors for about one hour. In a separate event, operations had to enter a Limiting Condition for Operations after receiving a safety-class instrument air receiver low pressure alarm. The addition of a desiccant may have inadvertently led to the plugging of the instrument air compressor.

F-Canyon: After puncturing one of the inner containers in a TRU waste drum, a remediation technician observed a small amount of smoke coming from the hole (see 11/19/2010 report). After careful planning, F-Canyon TRU personnel opened the can to determine the cause of the smoke and to prepare the remaining waste for shipment to WIPP. The can was filled with various materials and resembled items that might have been swept from a furnace including a significant amount of very fine particles. A sample of the particles was taken to determine origin of the smoke. Based upon the amount of powder and the small amount of fumes that were observable, the site rep considers that it is improbable that the reactant will be confirmed. Engineers are currently reviewing the sample data. None of the remaining cans from this drum exhibited any indication of a reaction taking place.

Criticality Safety Program (CSP): The site rep reviewed the draft, revised criteria for the functional classification of criticality safety controls. Controls would now be classified as safety significant, specific administrative controls, key attributes of the CSP description in the Technical Safety Requirements (TSR), or Designated Defense-in-Depth and listed in the Documented Safety Analysis. In general, the new criteria try to ensure that anticipated or unlikely scenarios with high worker consequence have at least one control explicitly credited in the TSRs. The sole reliance on administrative controls requires DOE concurrence and DOE approval would be required to eliminate or change key attributes of the CSP. The contractor is proposing that distributed control system (DCS) interlocks be listed as a key attribute of the TSR because of potential difficulties upgrading the DCS to safety significant.

F/H Laboratory: Because the planned Recommendation 2004-2 gap modification provides minimal safety improvement and the technical basis for the credited leak path factor is weak, engineers are conducting an alternative analysis to identify how to best reduce the risk from fires and seismic events. Options being considered include ventilation and fire system modifications, vaults, and structural upgrades. (See October 8 – 29, 2010 reports).

Saltstone: SRR conducted another successful grout run this week and plans to start the contractor Operational Readiness Review next week.