

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 9, 2008

TO: J. Kent Fortenberry, Technical Director
FROM: M. P. Duncan and M. T. Sautman, SRS Site Representatives
SUBJECT: SRS Weekly Report for Week Ending May 9, 2008

Savannah River Nuclear Solutions: The Site Reps met with five operations, engineering, and safety executives to discuss future interactions with the Board and site safety issues.

Interim Salt Disposition Project: The first salt batch was processed through the Modular Caustic Side Solvent Extraction Unit (MCU) last weekend. No equipment problems were encountered. No carryover of Isopar was detected in the decontaminated salt solution (DSS) or the strip effluent hold tanks. Cesium concentration in the DSS was very low. Because of dilution from heels and the need for the cesium to reach steady-state loading in the solvent, meaningful decontamination factors will not be available until about 10 batches have been processed. Rather than shut down MCU for several days to inspect the siphon break holes for Salt Solution Receipt Tank (SSRT) #1 (see last week's report), the decision was made to continue processing using SSRT #2, which was used repeatedly during the readiness reviews. The inspection will be performed if some other issue forces a cell entry or when the Management Control Plan is completed in late May. Now that the first batch of salt solution was processed in series, the Actinide Removal Process (ARP) and MCU are beginning concurrent operations. In addition, operations made a number of changes to avoid the problems that occurred during the first monosodium titanate addition (see 4/25/08 report).

F-Canyon: Two workers wrestled for a reported half-hour trying to remove a manipulator arm (~200 – 250 lbs) from a transuranic waste drum. After contamination was detected on the operator's outer pair of protective clothing (PC), the gloves and outer PCs were changed. Shortly thereafter, a 2" tear was observed in one of the enclosure (i.e., similar to glovebox) gloves that the operator was using. A Radiological Control Inspector detected activity on a nearby air sample filter that corresponded to 2000 Derived Air Concentration – hour. Because this level exceeded the suspension guide, work was stopped and the workers exited the area. The operator's modesty clothing alarmed the personnel contamination monitor and 500 dpm alpha was later found on the operator's skin. The skin was decontaminated and bioassay samples were submitted. A lessons learned is being developed for handling heavy items and for more frequent contamination surveys.

HB-Line: The building vacuum interlock – designated safety-class – is designed to shut off the air supply fans in the event that the building becomes pressurized, such as during a fire. On Friday morning, it inadvertently actuated. The facility took the appropriate immediate actions, confirmed that no actual pressurization had occurred, fixed the apparent problem, and will perform an additional test before declaring it operable.

235-F: The combustible loading in 235-F was further reduced when about 10,000 lbs of combustibles were removed from a californium shuffler that is no longer in use (see 2/8/08 report).

F Tank Farms: Mechanical sludge removal in tank 5 is complete and preparations are ongoing to start chemical cleaning with oxalic acid in early June.

H Tank Farms: The 2H Evaporator returned to service after underground steam leaks were repaired. The use of infrared thermography is proving to be very useful in the early identification of steam leaks and pinning down their location.