

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 25, 2008

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending July 25, 2008

Contract Transition: As part of their Due Diligence review, Savannah River Nuclear Solutions (SRNS) generated 122 observations that were initially classified as unsatisfactory. A Site Rep review of these write-ups found them to be a good mixture of known site weaknesses and newly identified items. This week, SRNS conducted a two-day Transition Readiness Review with DOE to confirm that SRNS was ready to take over M&O operations next Friday. Their top operations concern was conduct of operations, specifically the lack of rigor in executing work in accordance with existing site operating requirements and unaddressed poor plant material condition. Second, reviews of the Radiological Control Program found extensive legacy radiological waste and weaknesses in the radiological contamination controls program. The third operations concern is the lack of rigor in safety basis analysis (e.g., compliance with requirements, transportation, and Unreviewed Safety Question program). SRNS is establishing a central nuclear and criticality safety engineering organization and is bringing these resources back to the SRS site. SRNS has negotiated a contract with the current subcontractor to provide needed resources and ensure the delivery of key deliverables for the coming months. Most of the Engineering resources were retained, but the head of geotechnical engineering is only acting. Many of the facility managers were retained. Vacancies were filled by promoting senior facility personnel or reassigning managers with relevant experience.

Savannah River National Laboratory: This week, researchers began bench scale fluidized bed steam reforming demonstration experiments on real Tank 48 waste. Since the samples are highly radioactive, the work was performed in the shielded cells. As this process generates flammable gases (e.g., hydrogen and benzene), it had to be controlled according to the Process Flammable Gas Control Program, which performs a safety-significant function. The Site Rep reviewed the hazards assessment package and discovered that the implementing procedures specified an interlock set point that could potentially exceed the flammable gas generation limits. Reportedly, the software interlock set point had already been changed to a setting that would not violate the limits. The implementing procedures were then updated to reflect the change.

F-Canyon: The discovery of increasingly high contamination on the exteriors of overpacked 55-gallon drums of transuranic waste has caused operations to halt the remediation of these drums until their hazards and controls can be reexamined. These drums, which were overpacked due to integrity concerns, were being removed from 85-gallon overpacks by operators (not in plastic suits) inside an A-Frame that does not have localized ventilation.

H Material Disposition: In order to support the current processing mission, DOE directed that Documented Safety Analyses that are fully consistent with DOE-STD-3009 are to be submitted by December 2009 for H-Canyon and October 2010 for HB-Line.

H Tank Farms: The MCU coalescer filter media was replaced again due to increasing differential pressure and sent to the lab for analysis. Water addition to Tank 12, in order to soften sludge and prepare for eventual bulk waste removal, has reactivated existing leak sites. While preparing to perform a camera inspection of this tank's annulus, a conduct of operations error occurred when workers did not ensure that the annulus was under negative pressure as required by the procedure.