

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 3, 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 December 3, 2010

Saltstone: Grout runs were attempted Monday, Wednesday, and Friday, but the first two were terminated during or shortly after transition to salt feed. Although a salt solution low flow deviation alarm cleared within a second Monday, it was quickly followed by a low dry feeds alarm. This combination of alarms required the system to shut down. Another flow deviation alarm occurred during Friday's startup, but the use of gravimetric versus volumetric control of dry feeds allowed the system to recover and grouting to resume. On Wednesday, operators shut down the system after a new instrument detected material accumulating at the two foot level of the dry feed chute. After reviewing the data, engineers recommended allowing material to build up to the seven foot level of the chute (i.e., high-high level) before shutting down. Although this was questioned by DOE and DNFSB representatives, facility personnel believe that having operators visually monitor the dry feeds level through the chute window while the alarm light is illuminated will provide adequate detection of further buildup. During Friday's run, the instrumentation periodically detected temporary buildup of dry feeds, but this buildup was very transitory. For the second time in two weeks, a loud thumping noise from the process room was audible for a few seconds. Facility personnel suspect hard material is passing by the boots of the peristaltic grout pump and operators did not detect any damage or leaks afterwards. SRR also commenced their contractor Operational Readiness Review for Vault 4 Organic Operations.

Based on DOE and DNFSB feedback, SRR is reevaluating chemical hazards using the code of record rather than screening criteria. The new chemical concentrations used in consequence calculations are lower because they reflect the limiting cation or anion (e.g., can't have more BaSO₄ than available Ba) and current vault flammability limits, which may be more restrictive than other limits. SRR is using these concentrations to determine which safety significant controls are warranted for the return of Tank 50 to service (see 5/21 and 7/9/10 reports).

Salt Waste Processing Facility: Contactor modules arrived at SRS on Friday.

Work Planning: The site rep met with SRNS to discuss upcoming changes to task level hazards analysis at SRS. These modifications are intended to:

- better define the scope and task breakdown,
- to require more frequent and thorough walkdowns,
- to increase the percentage of work packages requiring full hazards analyses,
- to consider "what if" scenarios, and
- to improve the quality of feedback.

In order to better highlight unique and/or important controls, generic Basic Hazard Controls for lesser hazards will be handled separate from the Assisted Hazards Analysis. Work planners and subject matter experts across SRS are going through a full day hazards analysis training course to emphasize that this analysis goes beyond simply checking off a bunch of yes/no answers on a computer. Many of the changes appear promising, but success will depend on the quality of the training and how much effort is spent monitoring implementation to ensure it is having the desired impact.