

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 11, 2011

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 February 11, 2011

H-Canyon/HB-Line: Citing budget and policy uncertainties, DOE directed SRNS to cease receiving bulk plutonium (Pu) for dissolution in HB-Line, complete highly enriched uranium blend down as soon as practical, and cease preparations for Pu processing in H-Canyon. DOE also directed SRNS to begin flushing H-Canyon dissolvers and head-end and complete flushing by the end of September. Furthermore, SRNS is to develop plans by March 31 for completing flushing operations and reducing the nuclear inventories in both facilities. SRNS is also to develop a staffing plan that identifies the minimum number of people to maintain both facilities in a deinventoried state and to modify documented safety analyses (DSA) and procedures accordingly. Transuranic (TRU) waste disposition would continue at H-Canyon. HB-Line may be used for preparing Pu for shipment to the Waste Isolation Pilot Plant. Finally, the letter requests that SRNS develop new/alternate missions for the facilities and to identify any “outlying” material onsite that is unsuitable for long-term storage. The letter does not, however, direct SRNS to maintain H-Canyon’s equipment and staffing in a “high state of readiness” per Public Law.

F-Canyon: While reviewing TRU waste remediation videos from December 2010, an engineer noticed that an operator repeatedly attempted to puncture a sealed, stainless steel can. Although the operator was unsuccessful, his attempts violated a Technical Safety Requirement (TSR) because Engineering had not completed an evaluation for this specific type of can (normal slip lid cans had been evaluated, but not stainless steel ones). The Drum Processing Plan directed operators to set aside this can for Engineering review and provided details about the can’s size and lid. However, the operating procedure did not clearly specify what can types and materials had been evaluated, but rather instructed workers to puncture thin-walled metal, slip lid containers (which this was). The facility is reviewing the wording of the TSR, the procedure, and how special instructions are briefed and implemented. (See 4/16 and 4/30/10 reports for related TSR violations).

While responding to a DOE question about the assumed damage ratio in an H-Canyon calculation, SRNS realized that they used an incorrect damage ratio in the recently approved F-Canyon DSA.

Tank Farms: After a worker delivered samples from H-Tank Farms, he detected contamination (up to 100,000 dpm β - γ) on his shoes. SRR is still investigating how and why the plastic lid of a sample vial broke and allowed liquid to leak out of the double-bagged, shielded container. Follow-on surveys did not detect any contamination in the truck, but contamination levels up to 1 million dpm β - γ were found over an approximately 16 ft² area in H-Tank Farms where workers transferred the sample.

Other Topics:

- DOE’s Operational Readiness Review of Saltstone identified three pre- and four post-start findings.
- Last week, SRNS safely removed the dome of the Heavy Water Components Test Reactor.
- The initial Fire Department response to smoking oil at H-Area New Manufacturing was delayed when several responders were denied access to a security door.
- SRR completed their Defense-in-Depth control pilots. SRNS facility reviews are proceeding well.
- DOE and SRNS are proposing that all high consequence criticality events identify at least one safety significant engineered control, specific administrative control, or SS key attribute in the TSR.