

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 23, 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 23, 2010

Saltstone Training: In response to Operational Readiness Review findings, Saltstone staff plan to provide Documented Safety Analysis refresher training to operations and engineering personnel, provide hands-on demonstrations on how to perform leak checks, revise qualification cards, complete missing evaluations and training, and to develop multiple versions of the shift operations manager written comprehensive exam. (See 12/17/10 weekly report).

Specific Administrative Controls (SAC): Contrary to DOE-STD-1186, the SRR standards/requirements identification document allows SACs, which are not written as a limiting condition of operation, to include recovery actions. (See 12/17/10 weekly report).

Chemical Screening: The Offices of Environmental Management (EM) and Health, Safety and Security reviewed SRR guidance for implementing chemical screening criteria in DOE-STD-1189. Their reviews found inconsistencies and misinterpretations of the standard and EM's 1189 memorandum. Several of their comments are similar to ones provided by the Board. (See 5/21/10 and 9/17/10 weekly reports).

Defense-in-Depth Controls: Although DOE has not issued their guidance yet, SRNS has begun reviewing the tritium facilities Consolidated Hazards Analyses to identify potential equipment important-to-safety defense-in-depth controls (see 7/16/10 letter). The preliminary list includes fire detection and alarms systems, various tritium monitors, the building exhaust system and stock, and some interlocks.

2010 Year in Review Part One: SRNS's accomplishments this year included the following:

- Nuclear Materials Operations had the lowest conduct of operations event rate in the past seven years.
- H-Canyon dissolved 627 kgs of highly enriched uranium (HEU), which was blended down to low enriched uranium and shipped in 26 trailers (about 23,400 kgs).
- H-Canyon implemented an upgraded safety basis and H-Canyon, L-Area, and F/H Laboratory completed preparations to ship and process used nuclear fuel.
- HB-Line dissolved 84 kgs of 3013 plutonium oxide and 12 drums of low assay plutonium (Pu).
- L Basin received 483 fuel assemblies from four domestic sites and five foreign countries.
- Conducted 19 destructive examinations and 26 non-destructive examinations of 3013 plutonium cans.
- K-Area received surplus Pu and HEU from Los Alamos, Lawrence Livermore, and Y-12.
- Evaporated ~4 million gallons from the P Reactor Disassembly Basin. Placed more than 83,000 yd³ of grout and concrete in P Reactor. Completed grouting the P Reactor vessel. Removed 200-ton gantry cranes from P and R Reactors and removed two exhaust stacks from P and R reactors.
- Commenced Heavy Water Components Test Reactor decommissioning, demolished the 185-3K cooling tower, and reduced the 293-F stack height.
- Completed 96 TRU waste shipments to the Waste Isolation Pilot Plant, dispositioning 493 m³ of contact-handled and remote-handled transuranic waste.
- Remediated 40 large boxes of transuranic waste in H-Canyon.
- Prepared 11,000 metric tons of depleted uranium oxide for off-site shipment.
- Tritium limited life components exchange shipments had a perfect record for the 53rd consecutive year.
- Extracted tritium from the Cycle 9A target rods.
- Completed the Waste Solidification Building (WSB) foundation, 23 of 24 first-level wall pours and 7 of 25 second-level wall pours. The WSB project is nearly 45% complete.