

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 7, 2009

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 August 7, 2009

Site Rep Office: This was Mr. Duncan's last week at SRS. Mr. Burnfield arrived at SRS.

American Recovery and Reinvestment Act: Two Design Change Forms (DCF), which involved drilling into the safety class (SC) F-Canyon structure, incorrectly reflected a general service functional classification. Not only did the Design Authority approve these DCFs, but he did not identify that the SC structure would be modified in the Unreviewed Safety Question (USQ) Screening and thus incorrectly concluded that a USQ Evaluation was not required. The Chief Engineer has restricted who is allowed to perform USQ reviews until remedial training is conducted. In addition, the DCF originator is a staff augmentation engineer from another organization, who was not trained on F-Canyon. An ongoing investigation is determining whether Conduct of Engineering Manual requirements were adequately flowed down and implemented for this subcontract. Last week, grouting at R Reactor was suspended because there was no safety plan in place due to inadequate flowdown of requirements in the subcontract.

Saltstone: Workers completed cleaning out the grout that resulted from the plugging of the grout pump hopper (see 7/2/09 report). Grout was found in more equipment than originally anticipated. Engineers are executing a troubleshooting plan to investigate potential causes for the drop in flow of salt solution to the mixer. The facility hopes to resume processing early next week.

Aging Management: An Integrated Facility Aging Management (IFAM) review of the H-Canyon Railroad Tunnel and Airlock recommended a redesign and installation of new circuits and control panels. The current safety significant permissive switches and relays interface with an antiquated door control scheme, whose equipment is unmaintained and not subject to configuration controls.

SRR used the waste tank purge ventilation system at F-Tank Farms as their pilot for their system viability assessment process. Unlike IFAM, which involves a detailed component by component review, this process discusses the environment, aging mechanisms, and failures/performance data for key pieces of equipment. The assessment included recommendations for performing additional inspections and failure analyses as well as design and program changes.

Defense Waste Processing Facility: A steam generator vaporizes closed loop condensate and supplies closed loop process steam to the Sludge Receipt and Adjustment Tank and Slurry Mix Evaporator. Last week, the steam generator developed a leak and shut down processing. This week, strip effluent was transferred from the Strip Effluent Feed Tank to the Precipitate Reactor Feed Tank to allow continued receipts of strip effluent resulting from salt processing.

Tank 48: The Fluidized Bed Steam Reforming Preliminary Design contract was awarded.

Solid Waste Management Facility: The Mixed Waste Processing Facility (MWPF) is constructed with steel panels and equipped with high-efficiency particulate air filters. Because transuranic (TRU) waste box remediation at F-Canyon will not resume until next spring, SRNS is considering installing huts inside the MWPF to allow TRU waste box remediation to start this autumn. Workers supplied with fresh air would inspect boxes containing less than one plutonium-equivalent curie and remove prohibited items. Since much of this work would be hands-on, the use of tools and other controls to prevent punctures and contamination events will be important (see 4/28/06 report).