

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 18, 2009

TO: T. J. Dwyer, Technical Director
FROM: D. L. Burnfield and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending September 18, 2009

Saltstone: Inhibited water (IW) is stored in the Clean Catch Batch Tank (CCBT). IW is used to produce clean caps, at the start of grout production before waste is introduced, and to periodically flush grout from the internal surfaces of the grout hopper. One known limitation of the CCBT pump is that it cannot provide adequate IW feed to the mixer at the same time it flushes the hopper. Last week, while starting up saltstone, the Shift Operations Manager (SOM) directed that the hopper be flushed while producing clean grout because they had been stuck in this part of the startup procedure for awhile. This action was not allowed by the Use Every Time procedure nor would have management or Engineering likely concurred with this direction if they had been consulted because of the above limitation. The flush caused a mixer flow deviation as the CCBT flow dropped and setback was automatically initiated. The flow loss from the CCBT created a slug of thick, dry material that plugged the hopper and hopper feed leg. (A similar slug caused the June 30 plug, but this time process water could have been used to perform the flush instead of IW). Workers pulled the hopper out and will spend several days chipping out grout so that processing can resume next week. A software interlock will be added to prevent this from recurring. The Site Rep and Operations Manager discussed the similarities between this event and the Modular Caustic Side Solvent Extraction Unit (see 9/4 and 9/11/09 reports). In both events, SOMs decided to perform atypical operations outside of a procedure without first consulting with Engineering or management.

F-Canyon: The Site Rep observed an emergency drill performed as part of the Functional Area Manager review for resuming transuranic waste drum remediation. After a simulated drum breach, workers evacuated the area and the Incident Scene Coordinator (ISC) notified the Facility Emergency Coordinator (FEC). Traffic control was an issue until security established road blocks with three vehicles coming or going while a Remain Indoors protective action was in place. A truck trying to deliver ice right next to the spill scene was inappropriately stopped by a drill controller rather than allow the players to deal with it. The passengers in the truck, which was within the 100 m evacuation zone, were ignored by the players for 27 minutes until the drill was suspended. Poor communications led to the Fire Department (FD) arriving in a different location than the FEC expected. There was little communication and coordination between the FD's Incident Commander and the ISC/ Radiological Control Organization (RCO) personnel because they were separated by the plume and F-Canyon. Nonessential personnel stood outside a building despite the Remain Indoors protective action. The RCO response was a bit slow and they did not use barricades to control the area. The performance during the drill and the A-line spills indicate the need for more emergency preparedness drills in F-Area.

Salt Waste Processing Facility: The Site Rep observed part of the first wall concrete placement from the deck to the 116' level.

H-Canyon: 1) A review of Radiation Work Permit entries identified that the painter who inadvertently entered the warm canyon was not signed on any RWP (see 9/11/09 report). Escorts are now required for all non-facility workers who enter contamination areas or worse. 2) The cooling water system Integrated Facility Aging Management (IFAM) evaluation noted that 13 manholes had never been inspected. The Site Rep observed the contractor inspect the last of these and reviewed the video for another manhole, where minor degradation was found. Ten IFAM evaluations were completed this fiscal year, but there is some uncertainty on whether the schedule will be maintained now that the performance based incentive has been completed.