DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 9, 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 October 9, 2009

Defense Waste Processing Facility: During a calibration surveillance of the total melter air flow loop, 12 pounds of glass were inadvertently poured into a cask. A Control Room Manager (CRM) signed a procedure step to place a plant system in manual operation as completed when it was not. The CRM wanted to allow the maintenance crew to get started with their work, but the person responsible for performing the task was not available. The CRM wrote a note to have the person perform the step as soon as they returned and then forgot about the note because of distractions from other pressing matters. The CRM knew that that action was incorrect, but did not understand the consequences of the action. Several aspects of the procedure could have been improved to preclude the CRM's actions: a) the prejob brief discussion in the procedure does not mention this hazard and it was reportedly not covered in the actual prejob brief, b) the step to place the control in manual is located in the approvals and notifications section of the procedure and not in the performance part of the procedure, and c) no caution is written into the procedure to warn of the potential consequences of not performing this step. Savannah River Remediation (SRR) personnel are in the process of developing the corrective actions for this event.

Salt Waste Processing Facility (SWPF): A SWPF Construction worker received a significant injury to his left hand while lubricating a 225-ton mobile crane. An oiler was oiling the cable of the crane using a rag and a can of oil. As the oiler poured the oil from the can onto the rag, the operator lowered the boom allowing the cable to pass through the gloved hand of the oiler while he worked the oil into the cable. While the boom is being lowered, the cable is passing away from the sheave, which lays the cable onto the drum, and out to the crane boom. When the crane boom was fully lowered, the operator and the oiler decided to oil the cable while the boom was being raised. As soon as the oiler gave the signal to raise the boom and the operator started to raise the boom, the oiler yelled "boom down" several times and the operator lowered the boom. The oiler stated that the rag had become caught in the pinch point between the cable and the sheave and the cable drew his hand into the sheave. The injury resulted in the loss of at least two fingers although the full extent of the injury is not yet known. It was later determined that other methods for oiling this cable could have been used, in accordance with the vendors manual, which would have precluded this injury. Parsons began a review of all jobs identified as skill-of-the-craft to determine if other jobs like this one should be more thoroughly analyzed for hazards.

Safety: SRNS implemented their Safety Improvement Compensatory Actions and Measures plan across SRS (see 10/2/09 report). The Site Reps observed work package screenings and reviews and work release by Authorized Individuals at several nuclear facilities. Operations and safety managers met with work crews to discuss the activity scope, procedure steps, hazards, and controls. SRR is planning a two day safety pause next week to discuss recent conduct of operations and safety events across the site with workers and increase their focus on safety.

Saltstone: In light of recent processing upsets (see 7/2, 9/18, and 10/2/09 reports), SRR is developing a Saltstone Processing Improvement Strategy in order to increase reliability and reduce process upsets.

HB-Line: In FY2010, 12 overpacked drums of low assay plutonium will be shipped from Hanford to SRS for eventual processing at HB-Line. A dry run was recently completed for unloading an overpack from a Radioisotope Thermoelectric Generator cask. Because of their packaging, the drums could not be assayed. Process history and modeling indicate that the oxide could have a 45 rem/hr contact dose rate with surface temperatures near 400° F.