

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 6, 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 March 6, 2009

Tank Farms: The repaired Tank 18 sand mantis resumed operations. The new slipper assembly worked as designed and operators are trying to unplug the forward spray nozzles (2/27/09 report). After flushing off most of the sludge, workers also removed the failed Tank 19 sand mantis and attached a new more robust sand mantis swing arm and tilt wheel (12/12/08 report).

P Reactor: The Site Rep walked down decommissioning work areas, including oxalic acid lines that are being tapped and drained. The Site Rep shared lessons learned from a Rocky Flats event (RFETS 2/20/98 report) where an explosive gas mixture was found after tapping into an oxalic acid line. The source of the hydrogen was believed to be oxalic acid corrosion of the stainless steel, some of which was trapped by crystallized oxalic acid that plugged the line. After DOE facility representatives reviewed the information provided by the Site Rep with the contractor, the contractor shut down tap and drain operations until they could have a metallurgist assess the situation.

Salt Waste Processing Facility: Consultants performed petrographic analyses and compressive testing on a set of concrete cores taken from areas that were most likely to have been damaged by the recent fire (1/30/09 report). No damage to the concrete from the fire was noted and it met the compressive strength requirements. Unrelated to the fire itself, some early age surface drying was noted. This was likely caused by the combination of the hot, dry air in the tent and the metal formwork surface not being covered by plastic sheets or an insulating blanket. Prior to future placements adjacent to the concrete in question, the consultants recommended that the surfaces be water blasted to remove loose, dried, and soft material.

DOE headquarters personnel performed an audit of the project's Quality Assurance program. DOE concluded that the overall program was implemented as required, also but preliminarily noted several needs. Examples included the following: enhanced vendor oversight, an increase of DOE oversight resources, an improved trending process, and a reinforced material receipt inspection effort.

Solid Waste Management Facility: A Central Characterization Project (CCP) manager sent to SRS after last week's shipping mistake identified that SWMF was using a SRS Drum Payload Assembly procedure that had not been reviewed and approved by the Carlsbad Field Office. To address recent interface issues, CCP will be sending a full-time manager to SWMF to manage transuranic waste shipments to the Waste Isolation Pilot Project (2/27/09 report).

Loss of Power: An investigation by the power company into the cause of the January loss of power event (1/23/09 report) concluded that it resulted from a loose connection between the timed relay driver (TRD) board and the backplane of the Supervisory Control and Data Acquisition card cage. However, a representative of the utility was unable to recreate the trip signals on a training Remote Terminal Unit. This calls into question whether the implemented corrective action to secure TRD boards will have the desired effect.