

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 2, 2010

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 April 2, 2010

C-Area: While modifying the drain line for a spent nuclear fuel transportation cask, a welder noticed a small flame coming out of the final closure gap. SRNL is investigating several possibilities for the source of the combustible material. These include: 1) material trapped in the interstitial areas of the cask and 2) potential interactions between the weld filler material and the material used in the construction of the cask.

Tritium Extraction Facility (TEF): The site rep observed workers moving and unloading a Legal Weight Cask. The site rep observed the following conduct of operations issues:

- Workers performed two tasks that they believed needed to be done, but which were not included in the procedure. First, TEF personnel let down a jack supporting the front of a trailer to prevent damaging it while unloading the trailer. (This action was later determined to be unnecessary.) Second, an operator moved a crane to an assigned spot to allow consistent survey data to be gathered during the habitability survey of adjoining spaces.
- Control room personnel did not always use three-way communications.
- Personnel did not clearly understand security posting requirements before they began a habitability survey. Personnel entered a stairwell access door before the top and bottom doors were appropriately posted. They had to exit and then reenter after the doors were posted with the correct signs.

Saltstone: Facility personnel replaced a pump in the salt feed tank. A maintenance crew removed the old pump, but space restrictions prevented them from placing it where they originally planned to in the process room. Instead, the crew placed the original pump on the opposite side of the rebuilt replacement pump. Since both the original and replacement pumps were wrapped and rigged identically, a second crew partially from another facility later confused the two pumps and mistakenly reinserted the old pump in the tank. Saltstone personnel later determined that the pump was not the cause of the problem they were experiencing and that other modifications were required. Later in the week, a construction worker received contamination to his skin, coveralls, and shoes while working on the Vault 4 roof in a radiological buffer area.

The Saltstone facility is in a planned outage through May 2010. Because of various outages to address operational issues and upgrades, the Saltstone facility will have spent less than 25% of the time between July 2009 and May 2010 processing waste.

Solid Waste Management Facility (SWMF): While a worker handled a drum filter inside the drum venting system, the filter contacted an exposed, energized wire and another piece of metal. This caused a spark and a loss of power as the system's breaker tripped. A protective cap on the end of a piece of heat trace had fallen off. SWMF personnel had verified the cap was present in 2006 following the issuance of an off-site lessons learned. SWMF also completed their activity pre-start review for remediating transuranic waste inside the former Mixed Waste Processing Facility.

Salt Waste Processing Facility: After dismantling concrete placement forms from an elevated wall, a worker intended to lower a large crowbar (Burke bar) to the ground. However, the worker failed to tie off the bar as instructed and the knots allowed the bar to slip through the rope. The worker also failed to notify the spotter that a load was being lowered to the base mat. The dropped Burke bar fell approximately 20 feet, hit the base mat, and then bounced upward, striking a laborer on the right hand and chin. The laborer received a minor abrasion on his chin.