

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 17, 2008

**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 October 17, 2008

**H-Tank Farms:** 1274 gallons were inadvertently transferred to H Pump Tank 3 while attempting to restart a Tank 22 to 49 transfer because two valves were out-of-position. Using independent verification, these valves were opened and later closed to vent and drain the line when the transfer was previously stopped. Despite multiple interviews and fact finding meetings, the definitive cause was not determined, but the investigation did identify several conduct of operations issues. When one of these valves was earlier found in the wrong position, the first line manager directed it be closed, but did not notify the shift operations manager or document this action. The Transfer Route Diagram valve status was not being maintained real-time and communication of what specific actions had been completed was not rigorous at times.

**Solid Waste Management Facility:** After a 6-week suspension, the Large Container Nondestructive Assay Management Self Assessment (MSA) resumed. The procedure step-by-step reviews that had been conducted by facility management resulted in a noticeable improvement in the rigor and proficiency of the dry runs that were performed during the MSA. As the lead controller was making final preparations for the MSA drill, a Radiological Control Inspector (RCI) noticed liquid on the drum lid which led to the real evacuation of the pad, mobilization of many RCIs, and the actual implementation of a Remain Indoors Protective Action. Initially, there was significant confusion amongst field personnel and shift management over whether this was a real event or a drill, which led to some communications mistakenly being identified as drill messages. It took ~35 minutes for the all clear to be given and protective actions to be released. While it is prudent to treat liquids from waste containers as potentially contaminated and you have to react to actual contamination found on reportedly clean items, facility personnel overreacted when liquid was found on top of a training use only drum. The only thing that any of the training containers on this pad contained were bricks to weigh the containers down and these drums had been repeatedly surveyed during mockups. Considering the fact that the many I-Beams in the roof of this building are very prone to collecting condensate, which routinely drips and forms rows of puddles on the floor, facility personnel are going to have to develop a more reasonable response than invoking a Remain Indoors every time water inevitably drops onto the containers below. During the actual drill, it took the Fire Department (FD) 30 minutes to arrive at the incident scene because the FD decided to initially go to a gate other than the one the shift manager had specified and the FD further encountered problems finding the intended gate reportedly due to poor signage. Similar response time problems were observed during the last Readiness Assessment drill due to FD familiarity with the facility gates and interface issues with operations personnel. (4/4/08 and 9/5/08 reports)

**H-Canyon:** The Documented Safety Analysis Upgrade effort identified the need for 31 new safety controls (7 non-criticality-related and 24 criticality-related). As the senior Safety Inputs Review Committee faces tight non-labor budgets, it is unclear whether any of these proposed new controls will be approved. Recent discussions are very biased towards accepting the risk or using compensatory measures (primarily administrative) to address all of the identified vulnerabilities related to red oil and hydrogen explosions and seismic events. Even the recommendations from the recent Exhaust Seismic Vulnerability Alternative Study are being reconsidered. (6/27/08 report)

**F-Canyon:** Isotopic analysis of the trailer floor and the second shoe mentioned in last week's report determined that the isotopes present were consistent with naturally occurring radiation.