

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 12, 2014

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending December 12, 2014

Board staff member Z. McCabe was on site and performed a field observation of K-area materials storage.

Emergency Management: The site rep observed a drill involving a simulated forklift rupture of a transuranic waste drum at the Solid Waste Management Facility. Weak communications resulted in a lack of coordination between operations, Radiological Protection Department (RPD), and Fire Department personnel. Thus, RPD did not initially show up where the contaminated victim was located and the Fire Department entry team sat around waiting for RPD support and then RPD went to the wrong location. Meanwhile, RPD inspectors did not take firm control of the potentially contaminated path the victim used during his exit and a RPD first line manager ended up walking through this path after briefing the Fire Department. This is the third SRNS drill in a row (see 11/7 and 11/14/14 reports) where the field response lacked proficiency and rigor.

The site rep also observed a tabletop practice session to familiarize staff at the steam cogeneration plant, site utilities, the SRS Operations Center, and facility control rooms on the communications that need to occur during a site-wide loss of steam event (see 1/10/14 report). Finally, the site rep observed a tank farms conduct of operations drill where the shift operations manager was in transit to F Tank Farms and the control room manager had a simulated heart attack, requiring the operators to take control of the response.

SRNS will conduct a staffing assessment of the emergency management program.

Maintenance: Starting in January, all SRNS maintenance mechanics will need to requalify every two years. This will involve 80 hours of classroom training, completing job performance measures, and continuous training on conduct of operations and lessons learned from recent events.

Tank Farms: Last week, tank farms personnel noticed that the radiation level at the top of the Tank 48 riser was ~100 times the expected levels (see 12/2/14 report). A video inspection of the inside of the tank revealed that a small portion of the solids have become buoyant and are floating on the surface of the tank. SRR sampled the tank and sent them to SRNL to determine why the solids have become buoyant. SRR also reviewed other tank conditions (e.g., temperature, level, LFL, etc.) and found them to be consistent with expected levels. In addition, SRR had been planning to mix the tank's contents by the end of the year to keep the volume of retained flammable gas to a safe level. After reviewing all the data, SRR intends to mix Tank 48 as originally planned.

The Tank 37 transfer jet is encased in the surrounding saltcake (see 9/5 and 9/19/14 weekly reports). The cleaning of this jet is important to the operation of the 3H evaporator. Previous SRR efforts to free the jet after increasing the liquid level in the tank failed. Now SRR is inserting a pump-on-a-stick to remove the excess liquids that were added in the earlier attempt to dislodge the pump. Once the liquids are removed, SRR can lower the high-level liquid conductivity probe and exit their response plan. In addition, SRR will be conducting a series of transfers involving Tank 37 and other tanks that should dissolve some of the salt in Tank 37, which is the 3H evaporator drop tank. This should support future operation of the 3H evaporator for a while.