

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 27, 2012

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman, and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending April 27, 2012

Board staff member Richard Verhaagen was on site this week.

Solid Waste Management Facility (SWMF): Because they could not remediate an unvented drum, H-Canyon workers overpacked it and returned it to SWMF for venting. After receiving it, SWMF personnel did not use their database to verify that the interior drum was vented prior to opening the overpack. When they saw that the interior drum was noncompliant because of the lack of a vent, the workers closed the drum. The required action in the Technical Safety Requirement (TSR) is to suspend activities within 20 feet of the container and then handle it as a noncompliant container. As a result, SRNS declared a TSR violation.

Nuclear Safety: SRNS recommended that DOE use a tritium deposition velocity of 0.0 cm/sec, use Briggs dispersion coefficients for elevated releases, and use Eimutis-Konicek dispersion coefficients for ground level releases. The Board had questioned the use of a 0.5 cm/sec dry deposition velocity for tritium oxide and the use of Tadmor-Gur coefficients in an August 19, 2011 Board letter.

F-Area: The contractors conducted a severe weather take shelter drill for F-Canyon, F/H Laboratory, the Waste Solidification Building (WSB), and the Mixed Oxide Fuel Fabrication Facility. The Board staff observed the response of WSB workers assigned to the three trailers inside the 235-F fence. (WSB construction forces did not participate). The trailer occupants evacuated to the WSB construction site, but did not actually shelter because of ongoing construction work. The assigned WSB controller did not show up for the drill or hot wash afterwards.

H-Tank Farms: SRR must repair or replace the Tank 51 telescoping transfer jet (TTJ) in order to continue processing the next sludge batch. (See April 6, 13, and 20, 2012 reports). Since the site does not currently have a spare TTJ, SRR is pursuing the repair of the jet. The contact dose rates are expected to be very high (>100 rad per hour). SRR is using a mock-up to practice the execution of the work package, which requires the use of long-handled tools. Although SRR wants to reduce the extremity dose to 8 rad per hour, SRR set the radiation work permit suspension guides much higher to provide latitude for the job. The Board's recent work planning letter discussed linking the suspension guides to expected conditions to help identify unanticipated radiological conditions rather than simply defaulting to artificially high ones. The site rep questioned the need for such high suspension guides upfront because senior radiological protection managers would be present during the activity and could authorize raising the suspension guides if it was really warranted. In other areas, SRR took positive actions to involve radiological protection management as well as the facility manager in the process of making field decisions.

SRNS personnel attempted to replace a power line pole that helps supply power to H-Tank Farms and other liquid waste operations facilities. SRNS met with H-Tank Farm engineering personnel and verbally agreed upon a scope of work and the desired configuration for the transformers and switch gear. However, SRNS and SRR personnel did not document their plans and direction was passed down to H-Tank Farms operations personnel via a telephone call. Somewhere in the undocumented discussions, the actual scope of work was miscommunicated. As a result, SRR incorrectly shifted the transformer loads and caused a loss of power to safety systems for a short time.