

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 17, 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 August 17, 2012

Readiness Assessments (RA): The site reps observed the conduct of three RA's across SRS.

- At H-Canyon, SRNS conducted a RA for the receipt of plutonium metal at HB-Line and its transfer to H-Canyon for dissolution. Level of knowledge interviews identified a number of weaknesses on the process and associated authorization basis changes. Plutonium oxide production at HB-Line will be the subject of a future RA.
- At Saltstone, DOE conducted a RA for the Enhanced Low Activity Waste Disposal project and Saltstone Disposal Unit 2. During the contractor's RA, SRR was unable to complete a successful grout run because of several problems with the equipment (See July 13, 2012 report). During this RA the equipment performed well and the SRR successfully completed the grout run. The level of knowledge interviews covered an appropriate range of topics. However, the operating procedures were not in compliance with the site's Conduct of Operations Manual and could not be performed without taking actions that were specified in notes and warnings. The accountability drill exhibited weaknesses much like the July drill. Additionally, the site rep noted that while the SRR drill developed to test the reactions to a spill met the requirements for the RA; it was simplistic and facility personnel did not adequately address the hazard that was present.
- At the Tritium Facilities, the site rep followed the initial evolutions that demonstrated the tie in between the Tritium Extraction Facility (TEF) control room and the H-Area New Manufacturing control room.

Savannah River National Laboratory: The main building of the laboratory experienced a power outage from a lightning strike at the same time the primary diesel generator was undergoing maintenance. Several pieces of radiological equipment were affected, but laboratory personnel were able to resume operations after clearing the normally clean areas.

DOE's August 10, 2012 letter to the Board stated that DOE concluded that replacing the existing A-Area fire water supply system (FWSS) with a code compliant fire water supply tank and fire water pumps was warranted. A recently completed SRNS alternatives analysis of 17 options recommended full replacement of the FWSS as the most desirable alternative. This option includes the installation of a new fire pump house with two fire pumps (one electric, one diesel) separated by a rated fire wall and protected by a sprinkler system. In addition, a new 300,000 gallon minimum fire water storage tank would be provided. The new fire pumps would be tied into the existing underground fire water header piping.

K-Area: An SRNS maintenance technician discovered that the grease, required by SRNS for lubrication of the bearings of an electric fire pump, was not the same as the grease that was previously used (see 8/10/2012 report). Upon further engineering evaluation SRNS personnel determined that the two greases are not compatible. While the pump retains the ability to provide water, the site is developing the course of action to return the pump to full operability.

SRNS personnel performed a walkdown of the two replacement electrical fire pumps. One member of the inspection team noted that the packing gland was cocked. The packing gland was removed and it was determined that it had worn a groove in the brass wear surface during the factory run test. SRNS is evaluating future actions for this pump.