

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 19, 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 October 19, 2012

Recommendation 2012-1 Savannah River Site, Building 235-F Safety: Under the assumption of a design basis accident, personnel inside the fence of building 235-F would have potentially received an exceptionally high dose. In order to preclude this from happening DOE and the contractor has taken the necessary action to move these people to locations further from the building.

HB-Line/H-Canyon: SRNS shipped DOE-STD-3013 cans containing plutonium metal to HB-Line. HB-Line prepared the material for dissolution and transferred the material to H-Canyon, where they were placed into one of the dissolvers. HB-Line will later convert the plutonium solution into oxide feed for the Mixed Oxide Fuel Fabrication Facility.

Fire Protection: Workers were conducting an annual test of two post indicator valves near F/H Laboratory. When the workers opened a hydrant to verify flow, an apparent water hammer struck the sprinkler system in a nearby office building. Witnesses described it as sounding like a helicopter landed on the roof and sprinkler heads visibly shook. As a precaution, F/H Laboratory entered two Limiting Conditions for Operation and began fire patrols and conducted inspections of their fire water supply system. An investigation is ongoing.

K-Area personnel needed to get performance data in order to support installation of a new fire water pump. While testing a fire hydrant in order to get this data, K-Area personnel used enough water to significantly drain the 192-4K fire water tank. The workers continued to fill the tank during shift turnover. Unfortunately, the oncoming shift did not arrive at the tank in time to prevent the tank from overflowing. The water from the tank flowed onto the ground for about 2 hours after the alarms were heard and before the fill water was shut off.

F-Tank Farm: SRR personnel continue preparations to replace the 2F Evaporator demister pad. (See 10/5/2012 report.) Further planning and contractor oversight efforts resulted in a procedure and controls that management considered adequate to complete the task. SRR construction personnel started work by removing a cell cover and installing engineered ventilation and fall protection. SRR anticipates completing the preparations and being ready to enter the cell next Tuesday. SRR is also completing tasks to remove two additional pumps from tanks in F-Tank Farms and moving a third.

H-Tank Farm: Last week, SRR declared a Potential Inadequacies in the Safety Analysis (PISA) regarding their discovery of the recirculation steam jet that was installed in pump tank 3 and the Tank 42 steam spargers. (See 10/12/2012 report.) This week SRR declared a positive Unreviewed Safety Question (USQ) after reviewing the information associated with this PISA.

Tritium: An operator in H-Area New Manufacturing was surprised when indications did not follow in the same sequence as normal and failed to close a valve in a timely manner. The failure to close the valve resulted in the failure of a rupture disk, because of excess pressure. The capture systems reacted as expected and no material was released to the environment.