

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 2, 2016

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending September 2, 2016

H-Canyon: The site representative observed workers pump simulated fissile solution from the Target Residue Material container, flush it, and respond to a simulated spill. The contractor Readiness Assessment (RA) team's findings included eleven related to conduct of operations and seven addressing fire protection.

When an operator rotated the plant and instrument air compressors, an arc flash occurred in the instrument air control panel and blew open the cabinet door. The operator took action to restore instrument air pressure when he noticed it dropping. The worker was not injured and the damage was limited to the cabinet. SRNS is troubleshooting the equipment to determine the cause of the arc flash.

K-Area: The site representative continued to observe the SRNS RA of the Plutonium Down Blend project. The final field evolutions and interviews of operations personnel were completed this week. The interviews revealed weaknesses in the level of knowledge of emergency preparedness, packaging and transportation, and criticality safety. The RA team also identified multiple procedure content and quality issues as pre-start findings. The RA team is expected to complete their document review and present their findings and opportunities for improvement to the facility next week.

Defense Waste Processing Facility: A control room operator mistakenly pushed the start command rather than the desired jog command for the slurry mix evaporator (SME) transfer pump. The control room manager approved the resulting supervisory permissive request on the distributed control system without performing the required verification. This caused the SME transfer pump to start and open prime water to the pump. During the 17 seconds the pump operated, approximately 30 gallons total (including less than 2 gallons of entrained process material) were inadvertently transferred to the melter feed tank. Facility personnel entered a limiting condition for operations (LCO) and stopped the melter feed pump. Further review of the completed procedure for jogging the pump identified that a conditional step was improperly "N/A'ed" by the operator and two pump trends were not attached to the procedure as required. An engineering evaluation and sampling did not identify any impacts to the melter feed tank due to the transfer.

Saltstone: The site representative observed the start of hot operations with the new Salt Solution Receipt Tanks. SRR built these tanks to support future Salt Waste Processing Facility operations.

Tritium: Poor coordination and communications led to the control room staff initiating an alarm response procedure and evacuating a laboratory when the subcontractor reset a fan. The plan to reset the fan was not provided to the control room staff.

SRNS has begun replacing glovebox oxygen monitors and awarded a contract to build prototype tritium air monitors (TAM). Both systems result in a high number of unplanned LCO entries at H-Area New Manufacturing – 37 for glovebox oxygen monitors and 27 for the TAMs in the last year. Each of the 46 TAM loops also has 14+ nuisance alarms each month. The glovebox differential pressure indicators for the glovebox strippers continue to generate many nuisance alarms – 10,568 in the last year. A time delay was proposed more than two years ago, but has not been installed yet.