

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 25, 2013

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 October 25, 2013

H-Canyon: Last February, dissolved spent fuel was sucked back into a steam cart while workers tried to unplug a dip tube. SRNS believes this incident occurred because the steam supply and purge line hoses were mistakenly reversed on the steam cart. (See February 15 – March 1, 2013 reports). To prevent this from recurring, H-Canyon engineers redesigned the steam cart to include different types of fittings for the hoses and to color code the air supply, steam supply, and purge line hoses. This week, the site rep observed the first use of the new steam cart, as well as the first time validation of the revised procedure for purging pneumatic instrument lines. The new cart and revised procedure worked fine, with the exception of a small steam leak.

During a review of a Nuclear Criticality Safety Evaluation (NCSE) for spent nuclear fuel dissolution, SRNS discovered an error in the criticality safety limit table in the Technical Safety Requirements (TSR). SRNS based the fissile mass limits on total uranium weight percent, while the TSR table header indicates that the limits are based on uranium-235 weight percent. SRNS verified that the NCSE parameters used to calculate TSR criticality safety limits are correct. SRNS probed the dissolver and found it to be free from fissile material. Dissolving is precluded by plant conditions at this time.

SRR: SRR employees returned to SRS on Monday. SRR management will review the organizational health of their facilities, equipment, and staff for the first two weeks. SRR activities included management briefings, field walkdowns, and management field oversight. Several of the SRR craft personnel left SRR during the period of minimum staffing. These positions included crane operators and a crane inspector. SRR is working to strengthen these critical craft positions.

The site rep completed a field observation of H-Tank Farm and noted several huts that needed to be repaired as well as lapses of conduct of operations (e.g., unattended procedures, and tools and waste left in the area). The facility representative also noted these deficiencies, and they were reported to the facility manager.

K-Area Material Storage (KAMS): K-Area personnel declared a PISA for KAMS when they discovered that the thermal analysis for the storage arrays includes the maximum heat loading for 9975 containers (19 watts) but not for 9977 containers (24 watts). (See 10/11 and 10/18 /13 reports.) This week SRNS revised the calculations and determined that no degradation to safety existed.

Recommendation 2012-1: The site rep attended a meeting between the contractor and DOE. The contractor indicated that the design work for removing fixed combustible material, de-energizing electrical equipment, and modernizing the fire detection and alarm system will be complete by the end of the week. SRNS also agreed to provide DOE with a list of implementation plan commitments that cannot be met, once the expected funding can be determined more exactly.

Defense Waste Processing Facility: SRR identified they had not performed a surveillance within the 30-day periodicity to check and remove water from the fuel oil day tanks for a diesel generator. (See 10/11/13 report.) They last performed the surveillance in late February. DWPF personnel determined that while several human factors improvements could be made to the database and the methods used for data entry verification, the error was primarily a human error since operations personnel had not adequately updated the database used to keep track of the surveillance. It was also determined that while they had failed to perform the surveillance in accordance with the TSR, the data had been recorded during other quarterly surveillances.