

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 18, 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 November 18, 2016

Headquarters Activities: Chairman Connery visited K- and L-Areas and discussed topics related to conduct of operations, nuclear safety, and the disposition of plutonium and nuclear fuel. Additionally, Ms. Lin, Ms. Sullivan, Mr. Shuffler, and Mr. Bradisse were onsite to review safety basis and walkdown of the K-Area Complex.

F-Area: DOE-SR approved the Justification for Continued Operation (JCO) for the Segregated Solvent Filters containing fissile material that resulted in a positive Unreviewed Safety Question (see 5/6/2016 and 9/23/2016 weeklies). The JCO continues the compensatory measures originally identified in May, which prohibit vehicles on the storage pad, lifting activities that could impact the filters, any "hot work," and the introduction of additional fissile material. The JCO also includes an additional compensatory measure which prohibits access to the storage pad during severe weather watches or warnings. The recent inspection concluded that the filters are sealed and can potentially become pressurized due to generation of hydrogen from radiolysis. Although SRNS personnel determined that the potentially pressurized filters do not require any additional safety controls, F-Area personnel are still considering options to further mitigate the hazards associated with a pressurized release. The potential paths forward F-Area personnel are considering include removing the sealed flanges on the filter inlet and outlet and replacing them with filtered flanges to allow a vent path. However, any work on the filters would require a revision to the JCO as it only allows for the continued storage of the filters on the pad.

HB-Line: A procedure to de-energize an electrical panel included a step for an engineer responsible for the distributed control system (DCS) to de-energize the uninterruptible power supply (UPS) for the supervisor's console. An auxiliary operator read the step correctly, but the engineer performing the action did not repeat the step back to the reader. Furthermore, the engineer was fixated on the UPS for the programmable logic controller (PLC) instead and turned off the wrong UPS. The engineer told the operator and shift operations manager that the resulting PLC power supply and trouble alarms were expected although these alarms should not have occurred until later if the procedure had been performed correctly. HB-Line personnel suspended the procedure a few steps later when they received several unexpected alarms when they turned off a breaker. This loss of power also required operators to use an abnormal operating procedure and enter a couple of Limiting Conditions for Operation. While the engineer had discussed the intended action with another DCS engineer beforehand, the engineer had not participated in the task preview or pre-job briefing. Later on, when the power was being restored an engineer also removed the power cord from the wrong piece of equipment.

Emergency Preparedness: SRNS will be hiring four additional drill scenario writers and five other personnel to fully staff their Consolidated Drill Team. (See 10/10/14, 7/17/15, and 4/29/16 reports).

H-Canyon: SRNS began taking concrete cores from the personnel tunnel to support the determination of the degradation rate in the exhaust tunnel. (See 12/16/15 Board letter).