

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 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 10, 2016

Tritium: As expected, calculated dose consequences for collocated workers are increasing due to changes in the methodology for atmospheric dispersion modeling (see 8/12/11 and 11/8/13 weekly reports). The site representatives talked to senior NNSA and SRNS managers recently about the impact this is having to accidents scenarios that currently have few preventive or mitigative controls (see 8/19/11 Board letter). This week, SRNS conducted a brainstorming session to identify potential engineering or administrative controls or changes to analytical assumptions that might have the potential to lower the calculated doses.

F-Area: An individual contaminated their finger with 4000dpm per 100cm² alpha while placing a tamper indicating device (TID) on a solid waste box (SWB). The individual waited in a radiological buffer area (RBA) while F-Area personnel placed the waste in a SWB and closed the lid inside a contamination area (CA). Radiological Protection (RP) personnel then surveyed the area around the SWB and reposted it as an RBA. The individual then approached the SWB and placed the TID. Upon exiting the RBA the individual performed a survey using a personnel contamination monitor and received an alarm. RP personnel determined the only contaminated area was on the individual's finger. RP personnel escorted the individual to the decontamination (decon) room and successfully completed the decon process. Additionally, RP personnel posted the whole laboratory floor as an airborne radiation area and CA until it could be proven otherwise. RP personnel's further investigation only revealed additional contamination (2000 dpm per 100cm² alpha) on the TID placed on the SWB and a roughly ½ inch square area under the TID. F-Area personnel are continuing to investigate the cause of the contamination.

H-Canyon: The H-Canyon New Hot Crane (NHC) had a power failure followed by a halon fire suppression system (FSS) discharge (see 10/28/16 weekly). The power failure was caused when one of the power shoes for the NHC came off the rail and resulted in a power surge to two electrical panels feeding equipment. The many subsequent repairs include replacing the fire panel and motherboard associated with the halon system. H-Canyon personnel were unable to retrieve the history from the motherboard to definitively determine what caused the FSS to activate, but evidence suggests that the discharge was either due to an electrical malfunction or smoke from the failure of other equipment. H-Canyon personnel are planning to finish the repairs and acceptance testing before returning the NHC to service next week. Although H-Canyon personnel perform quarterly visual inspections of the NHC power shoes and rails, there has not been any preventative maintenance (PM) performed in several years. The lack of a PM was originally identified as an issue last September, but has not yet been approved.

SRR Operations: The site representative met with SRR operations personnel to discuss any persistent openings in their shift crews, the use of overtime to satisfy Technical Safety Requirement minimum staffing levels or watchbill positions, and how often workers were approaching or exceeding overtime limitations. SRR has only encountered a few minor issues. For example, one facility was short one operator for several months and the facility manager twice approved shift operations managers to work in excess of 72 hours in a 7-day period to accommodate vacations.