

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 12, 2018

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending Jan. 12, 2018

Board Member Visit: Board member D. Santos was on site January 10 and 11. Mr. Santos observed drum mining in K-Area, Target Residue Material activities at H-Canyon, and an oxygen monitor functional check in H-Area New Manufacturing. Additionally Mr. Santos met with representatives of DOE-SR, NNSA-SRFO, SRNS, and SRR. The topics discussed include the progress towards resolving the H-Canyon Exhaust Tunnel safety issue, the status of the instrument air lines issue at H-Canyon (see below), and the emergency preparedness and response of collocated workers during a radiological release at Tritium Facilities.

K-Area: In response to concerns raised by the Board and technical staff, DOE-SR has approved a revision to the K-Area Authorization Agreement (AA). The revision precludes returning the californium shuffler or the digital radiography unit (DRU) to service. In addition it prohibits refilling the DRU with mineral oil. This AA revision formalizes SRNS and DOE-SR's previous actions to staff concerns (see 3/24/17 and 7/14/17 report).

H-Canyon: H-Canyon personnel have identified leaks on the instrument air lines for 9 of 58 vessels as part of their extent of condition (EOC) review (see 12/1/17, 12/8/17, and 1/5/18 reports). The H-Canyon safety basis requires three of the nine vessels to have purge air supplied via the instrument air lines to remove flammable hydrogen for the headspace. Because the purge will not be restored within the required amount of time, H-Canyon personnel have developed a response plan for each vessel that describes their bases for allowing them to be without the purge for longer than the duration specified in the safety basis. DOE-SR approved one response plan on Jan. 2 and received the others from SRNS this week. H-Canyon personnel have completed their efforts on the vessel on which this issue was originally identified and returned it to service.

Salt Waste Processing Facility (SWPF): A test engineer manipulating a 3-way valve unintentionally allowed water to gravity drain through another valve, which had previously been found in the failed open position, and into a tank. Complicating the matter is that the calibrations for the tank's two density transmitters had drifted and the tank level was actually higher than indicated. As a result, ~50 gallons of water overflowed from the tank into the sump. While only water was spilled, Parsons is starting to receive chemicals for upcoming simulant tests.

In light of recent DOE Enterprise Assessments and DOE-SR assessments, DOE-SR directed Parsons to take actions to bring their contractor assurance system into compliance with DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*.

Tank Farms: SRR is having a team conduct a systems engineering evaluation of options for minimizing the 3H evaporator pot leak impacts. These options include repairing or replacing the evaporator pot, operating the pot as is with additional controls, use of portable processing equipment, and alternate means for managing Defense Waste Processing Facility recycle water and wash water.