

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 15, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending May 15, 2020

Savannah River Tritium Enterprise (SRTE): H Area New Manufacturing has more than 40 valves (out of several thousand) that are leaking. Typically, 5+ valves fail every month and it often takes four months to repair them due to vendor, schedule, and other issues. Because of this, it has become a commonly accepted practice for control room operators (CRO) to open and close valves as necessary to be able to pass a rate of rise test. Shift management accepts this practice and some procedures have allowances for operators to alter the boundaries so they can pass the test. Earlier this week, a CRO opened a leaking valve to relieve any gas trapped between it and another valve in order to pass the rate of rise test, but the operator forgot to reclose the valve. During subsequent charge vessel loading operations, this open valve exposed a rupture disk to higher than rated pressure, causing it to burst and the gas to enter a relief tank. (Twenty minutes elapsed before it burst because of an orifice between the leaking valve and the rupture disk). The qualified CRO was supervising a CRO under instruction and performing a second person verification for a second evolution. SRTE entered an operational pause and temporarily suspended all non-essential operations. SRTE is also performing Senior Supervisory Oversight on each shift to provide coaching and reinforce conduct of operations expectations. SRTE is also replacing the valve and removing the allowance to operate valves outside of the procedure.

One of the 750 ton chillers shut down as programmed when it reached 1400 hours of run time without motor lubrication. When the chiller shut down, the resultant increase in humidity in the process rooms caused several tritium air monitors to alarm. SRTE personnel entered the appropriate limiting condition for operation until the other chiller was manually brought online and the alarms cleared. Prior to the chiller shutting down, the control panel displayed a warning message regarding the lubrication after 1000 hours of run time. Per the discussions during an issue review, several operators noted the warning message and reported it to the shift manager. It appears that the multiple shift managers informed of the warning believed that the upcoming preventative maintenance would include lubrication. The maintenance (originally scheduled for early April) had been postponed by the vendor due to the COVID-19 pandemic until May 21. According to SRTE personnel, this maintenance activity should not have been postponed because SRTE had not stopped normal operations. One of SRTE personnel's corrective actions is to revise the system training on the 750 ton chillers to include the lubrication maintenance requirement.

COVID-19: DOE and the contractors continued to prepare the site for returning workers. DOE-SR is working closely with DOE HQ to determine when it is appropriate to transition to the next phase. While the site is receiving many new N95 masks, many masks already at SRS were set aside after offsite and onsite testing found that masks provided by certain suppliers were not meeting the required filtering efficiency.