

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 7, 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 February 7, 2020

Readiness/Implementation Verification Reviews (IVR): DOE began their Operational Readiness Review for the Salt Waste Processing Facility. SRNS conducted a Readiness Assessment for a new activity that will allow the Tritium Extraction Facility to process waste gas and send it to the stack. Contractors also began IVRs of recent safety basis changes at the Defense Waste Processing Facility, K-Area, and the Solid Waste Management Facility. The staff observed an emergency preparedness exercise, evolutions, interviews, and other activities.

Tritium Facilities: A procedure noncompliance and an inadequate task preview resulted in placing H-Area Old Manufacturing (HAOM) in a state of reduced ventilation. The facility status board had incorrectly listed exhaust fans #2 and #3 as online, whereas exhaust fans #1 and #2 were online. According to Tritium personnel, it appears that fan #3 tripped off some time before the loss of ventilation issue occurred which caused fan #1 (in auto) to come online. Considering there does not appear to be any log entry of a low differential pressure alarm, Tritium personnel believe that fan #1 was able to come up to speed before fan #3 slowed down enough to no longer provide adequate airflow. The fact that fan #1 was running rather than fan #3 was not identified by any personnel including the HAOM shift manager who is tasked with updating the status board during facility walkdowns every shift. The operator tasked with ensuring the correct fans were running incorrectly verified that fans #2 and #3 were running twice. During the task preview while being observed by trainees, the operator did not have the procedure in hand and incorrectly believed fan #3 was fan #1 without confirming the component number. Additionally, during the evolution, the operator verified that the hand switches (#1 in auto and #2 and #3 set to run) were in the correct position rather than actually observing the fans. Shortly after the noncompliance, two operators opened a breaker for fan #1 to secure it for maintenance. This shut down fan #1 leaving only fan #2 operating. HAOM personnel responded appropriately and were able to restore ventilation later that shift.

A valve misalignment caused a rupture disk to fail at H Area New Manufacturing. The valve was misaligned because workers were using a procedure that had generic, fillable valve tables, and which did not correctly describe the actions necessary to properly align the system valves for the test. Consequently, the procedure could not be executed without excessive interpretation by the assigned individual. Valve lineup are not generally performed after maintenance here. Such a lineup can provide a known starting point, which allows the development of clear procedures.

F/H Laboratory: SRNS paused layup activities and performed an issue review when they discovered that a work crew had removed and then replaced a work enclosure without using an approved work document; a fire permit requirement was not implemented because of this error. During the meeting, participants noted that the work procedure had not been used for the pre-job brief and was not used in the field during the performance of the work. They also identified weaknesses in the implementation of some work control and release practices at the facility, and in communication that supports those processes, that also contributed to the error.