

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 17, 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 July 17, 2020

COVID-19 Update: The number of positive tests for SRS employees increased from 87 to 137.

F-Tank Farm: Design Services evaluated the proposed travel path for transporting a 180 ton crane to Tank 44 to ensure the crane would not damage any underground pipes or electrical commodities. A map showing the boundary of access and setup around the tank was emailed to Construction. This map was included as part of an ordinary lift plan. Two days later, construction forces transported the crane to the tank using a different route, which had been used previously for accessing another tank and did not get this alternative path approved in advance. SRR paused crane movements. Future crane transport plans must now be reviewed and approved by the SRR Site Rigging Authority and other managers. SRR is planning to revise the current checklist for future crane transport and setup and is considering developing maps showing approved transport routes for various vehicles.

H-Canyon: Due to an inoperable sump liquid level instrument (a criticality control), a crane operator was visually (camera) monitoring a steam jet transfer of Target Residue Material as a compensatory measure. The crane operator noticed a significant amount of steam filling the canyon cell, which they believed could be due to a leak. The crane operator quickly informed the control room of the suspected leak who stopped the transfer. After the fact, H-Canyon personnel conservatively estimated (through tank mass balance) that 387 liters spilled onto the cell floor due to a leak in a jumper gasket, although H-Canyon personnel believe the actual number to be significantly less.

This event raised a question concerning the criticality controls for a leak scenario. The level indicator is a credited control for detecting leaks which would allow H-Canyon personnel to respond appropriately. However, although a measureable amount of liquid leaked from jumper gasket, debris on the cell floor inhibited the liquid from flowing into the sump thus the liquid level did not increase. This raised the question of whether or not the sump liquid level is a reliable control. H-Canyon personnel entered the potential inadequacy of the safety analysis; however, they have determined that the currently analyzed scenarios are bounding and no additional controls are necessary based on historical data and their belief that the leaked liquid would have eventually gotten to the sump had they not flushed the cell 36 hours later.

F/H Lab: Two SRS Fire Department (SRSFD) personnel entered a contamination area (CA) without the appropriate personal protective equipment. As reported during an issue review, the two SRSFD personnel were distracted and didn't realize they were entering a CA. Once they realized their error, the response was appropriate and the personnel were not contaminated.

H-Area New Manufacturing: Personnel were performing a volume calibration when the room Tritium Air Monitor alarmed. Tritium personnel responded correctly and no one involved received a dose.