

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 25, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: L. Lin, Z. C. McCabe, E. P. Richardson Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending March 25, 2022

Spent Fuel Project (SFP): Operations experienced continued difficulties with the processing of the first 18.5-ton fuel cask in over a decade at L-Area. Following procedure issues and two subsequent fuel assembly releases within a week (see 3/17/22 report), the team failed to follow the lid closure procedure and used an incorrect pattern to torque the closure lid bolts. The operators, standing on elevated platforms, devised a plan to torque every fifth bolt, vice the procedurally required X pattern, until they tightened all 24 on the cask. They did this without consulting the reader (who was holding the procedure showing the correct pattern), the first line manager (FLM), or the additional management oversight (assigned due to recent issues) who were all at floor level next to the cask. The reader and FLM both assumed that the workers were following the correct pattern but did not verify or placekeep the procedure. While preparing for the second torquing pass, the additional manager noticed the operators counting bolt holes and called a time out to investigate. SFP Engineering determined that the cask was not damaged since this was the initial low torque pass. An issue investigation was conducted, and a post job of the entire evolution is planned following the campaign of three casks. The focus of the Facility Self-Assessment (FSA) completed prior to the campaign was only on the decontamination of the 18.5 ton cask, a task only performed on these type casks, and did not review the unloading or fuel handling evolutions considered common to all casks, where many of the recent issues should have been identified. SFP management has held briefings with the team and implemented some other corrective actions (tool redesign, lid template creation) and has decided to continue processing this and the remaining 18.5-ton casks along with the other two different type casks of this campaign. Based on the volume of issues, the Resident Inspector questions the scope of the FSA and the decision to proceed based on the demonstrated lack of readiness.

H Canyon: On 3/23/2022 a crane operator experienced a mild shock when they pressed the top left button on the right joystick of the new warm crane control panel. They reported this event to their supervisor who directed the team to caution tag the joystick and initiate a work request. The caution tag was incorrectly used and included instructions to not operate that equipment. No further notifications were made, and the operator was not sent to site medical for evaluation as required. On 3/25/2022, following discussions with the troubleshooting team, the Shift Operations Manager (SOM) reported to the crane control room to investigate. The SOM attempted to recreate the sensation and felt the same mild shock on his right thumb. A timeout was taken, and a medical emergency was declared. The SOM, along with the previous operator, were evaluated by medical and cleared to return to work. Troubleshooting revealed that with the button depressed while also holding the left joystick, there was an unidentified 24VDC source present. The joystick was tagged out and barricaded pending repair/replacement.

K-Area: During down blend operations on 3/20/2022, two small pieces of what is likely plutonium-aluminum metal alloy were found mixed in with the oxide as it was poured out of the convenience can originating from the Hanford site. Work was immediately stopped, and an investigation was initiated. The event was declared a Technical Safety Requirement violation.