DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 7, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: A.Z. Kline, L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending July 7, 2023

Savannah River Tritium Enterprise (SRTE): The SRTE safety bases credits their emergency preparedness (EP) program supplementing a worker training program to mitigate very high dose consequences for several evaluated accident scenarios. Following demonstrated weaknesses in the SRTE EP program throughout 2022 and 2023, the resident inspectors (RIs) have been expressing their concerns to SRTE and NNSA EP management (see 3/31/23 and 10/28/22 reports). As part of this effort, the RIs met with these leaders to discuss progress on the SRTE drill improvement plan which has been in place since August 2022. While some actions from the plan have been completed (e.g., training events, improving simulator functionality, and evaluating current processes), the RIs have observed marginal improvement in the conduct of drills and exercises. SRTE management stated that they have one fully approved drill scenario able to be performed with a few others going through the review and approval process. They also stated that they have 32 other approved drill scenarios but are unable to perform any of them prior to validation because they were not maintained. In addition, it was unclear during the discussions what progress has been made with improving the knowledge of the drill controllers, as few actions have been taken to date. SRTE management also indicated that aside from the plan itself, there is no formal method of scheduling or tracking completion of the action items listed. The Board's staff continues to question the prioritization of these improvements and the pace of progress.

L-Area: An RI observed L-Area personnel relieving pressure in two drums of nuclear waste originating from Idaho National Laboratory (See 6/23/23 report). The work required months of planning, custom tool and radiological hut fabrication and was conducted by personnel in supplied air plastic suits. Following multiple unforeseen delays, the team executed the procedure and vented both drums successfully prior to returning them to long term storage. The success of the infrequent and complex evolution was due to extensive planning, training (classroom and mockups), and effective management oversight during execution of the procedure.

H-Canyon: During a transfer of radioactive material within H-Canyon, an operator closed a valve without the use of an approved procedure. A vent valve had a site condition tag on it due to a leak, so the operators created a work-around to close the vent valve for transfers and re-open it upon completion. Prior to the transfer, the control room operator (CRO) directed the gang valve operator (GVO) to close the vent valve. The GVO heard a request to close the process air branch header, which they did rather than closing the vent valve. After completing the transfer, the CRO requested a second GVO to open the vent valve. The second GVO found the vent valve to already be open and informed the CRO. Upon discussing the valve positions with the first GVO, they realized the process air header valve had been closed and restored it to its correct configuration. Radiological protection department personnel performed surveys of the area to detect potential suckback of radioactive material and found no anomalies. During the issue investigation, personnel identified that poor three-way communications and operation of valves outside of the approved procedure contributed to the issue.