

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 2, 2022

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 December 2, 2022

Defense Waste Processing Facility (DWPF): The resident inspectors (RIs) conducted a walkdown of fire barriers at DWPF that included fire walls, penetrations, doors, and ductwork. During the walkdown, the RIs observed a fire door propped open by an unapproved object and a fire door that would not self-close due to interference with the door frame. The RIs notified the shift operation manager and conducted a follow-up walkdown with the fire protection engineer, who subsequently developed an impairment on the fire door that would not self-close. DWPF maintenance personnel have since fixed the door. The RIs also questioned the configuration of several fire penetrations and are continuing discussions with the facility.

Emergency Planning and Drills: The RIs met with the SRNS Emergency Planning (EP) and site drill team senior management to discuss recent improvements in the emergency response program. SRNS personnel conferred measurable progress in multiple areas of concern, including a documented transition plan for Savannah River Tritium Enterprise (SRTE) and site integration. The transition plan notably includes the assignment of a very experienced Emergency Planning Coordinator to assist the SRTE EP group, planned training activities to increase facility level of knowledge for controllers, and dedicated SRNS executive leadership involvement in all upcoming drills and exercises (see 11/4/22 and 10/28/22 reports).

Savannah River Tritium Enterprise (SRTE): The RIs conducted a walkdown of 233-H fire barriers with representatives from the SRTE Fire Protection organization and NNSA-SRFO, with a focus on ongoing efforts to inspect and repair penetration seals in the facility. In 2015 SRTE personnel identified a finding regarding insufficient documentation for penetration and seal inspections, which were the subject of an earlier revision to the site fire protection procedures. Since that time, SRTE personnel have undertaken a significant effort to identify all penetrations in 233-H fire barriers to establish a baseline, label all accessible penetrations, and write impairments for inadequate penetration seals. Impairments include associated corrective action plans and schedule for bringing the penetration seals into compliance with the site procedure. 233-H has over one hundred fire penetrations in various states of compliance. Many have been updated during this effort, but there remain a substantial number that are either known or suspected to be inadequate due to the lack of construction documentation. SRTE personnel's efforts are scheduled to be concluded in 2028.

Site Loss of Power: While performing preventive maintenance, a site utility mechanic opened the incorrect breaker, resulting in a loss of power impacting H-Canyon, H-Tank Farms, SRTE, E-Area, the Salt Waste Processing Facility, and DWPF. At DWPF, two zone 1 exhaust fans lost power—the load center supplying the two fans receives backup power from an emergency diesel generator that was out of service at the time and was not tied to the other diesel generator. This caused the inlet plenum pressure to rise, which tripped a safety significant interlock. Power and ventilation were restored within 5 minutes. The site declared an ORPS reportable 4B(3). A fact finding is scheduled for next week.