

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 23, 2022

TO: Christopher J. Roscetti, 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 September 23, 2022

Savannah River National Laboratory (SRNL): The resident inspectors (RIs) conducted a walkdown of SRNL and observed a ventilation streamer that was visibly indicating flow from a Radiological Buffer Area (RBA) for contamination control into a clean area. Radiological best practices and nuclear ventilation handbooks establish that air should flow from less contaminated to more contaminated area. SRNL facility management acknowledged the issue and postulated the cause to be from two air handling units (AHU) not currently operating. Upon conducting a walkdown after the AHUs were back in service, the ventilation streamer was indicating flow from the RBA to the clean area. SRNL facility management have determined that the issue is due to a local phenomenon and have moved the boundary to where airflow was appropriate.

Savannah River Tritium Enterprise (SRTE): SRTE personnel held two separate issue investigation meetings this week regarding a testing issue and a quality issue. In both instances, SRTE personnel were able to appropriately define the problem statement and demonstrate their ability to conduct an adequate investigation of issues to identify causes and corrective actions.

Event Investigations: The RIs identified several weaknesses across SRS regarding event investigations (see 9/9/22 report). When discussing these concerns with the contractor organizations, contractor representatives identified that the responsible manager and the use of an investigative team would alleviate potential DOE Order 422.1 non-compliances. Over the past several weeks, the RIs have attended issue investigations performed by various contractor organizations. In most instances, the identity of the responsible manager was ambiguous or debated by individuals when asked. Further, the investigation team was not always clearly defined or designated; however, the overall investigations did not suffer due to the performance and experience of a few individuals. This reveals a weakness in the designation of who is specifically responsible for verifications of the requirements in the investigative process and the training and qualification of investigators. In the opinion of the RIs, this represents an over-reliance on the experience of specific individuals rather than a robust investigation process.

L-Area: An operator performing inspections in an outdoor radioactive material area (RMA) noticed holes in a drum located in an adjacent inactive contamination area (ICA). Radiological protection department (RPD) personnel activated the ICA and surveyed around the controlled area and surveyed the equipment on the cask pad. Two containers had holes and have since been wrapped in plastic. Contamination was found at the southwest end of the pad and outside the controlled area where rainwater runs off. The area is now an active contamination area and the boundary expanded to include where contamination was found. The cask pad has contained legacy radiological equipment for decades and is exposed to the environment. During the issue investigation, it was discussed that there are no requirements to perform inspections of ICAs. The RIs questioned whether it is appropriate to identify this area and other outdoor areas as an ICA, which is defined as being an area containing sources of contamination which are stable and present little risk for spread of contamination that could impact the surrounding areas.