

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 19, 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 August 19, 2022

**Solid Waste Management Facility (SWMF):** A resident inspector (RI) and member of the Board's staff observed a training drill involving a dropped transuranic waste drum during lifting of a payload assembly and an injured individual. This was the same scenario as the previous exercise where the resident inspectors had concerns (see 6/17/22 report). The drill was paused early on due to several weaknesses in the incident scene response, such as responders prioritizing surveying for contamination rather than taking care of the unconscious victim and other responders entering the area without understanding the potential air activity and contamination levels and not wearing the appropriate personal protective equipment (PPE). The RI informed a controller that they noted that some players inappropriately continued to don PPE and discuss the drill during the pause. After the restart, the controllers coached the players frequently to improve their response. However, there were still delays in communication between the incident scene coordinator (ISC) and the incident command post (ICP) due to the ISC electing to stay near the victim with other personnel rather than go to the ICP immediately. Other weaknesses included radiological protection personnel directing operators to take a route that was downwind and in the direction of the plume and confusion over which hospital the patient was going to.

**Respirator Training:** Beginning on 6/27/22, a series of RI observations and discussions with site training management identified multiple recurring deficiencies with the powered air purifying respirator (PAPR) and plastic suit training program. Some issues observed during a PAPR class taught by a primary instructor included directing students to fill out their own job performance measure (JPM) evaluations with satisfactory scores prior to completing the task and then performing the entire class's (greater than ten participants) evaluations concurrently with minimal observation of individual performance. Similar issues with this method were raised in an SRNS assessment in 2020, but corrective actions (stated to be closed on 3/22/2021) proved ineffective at meeting the standard. During a plastic suit JPM, the candidate failed and immediately re-attempted the evolution. During the re-test, the instructor assisted the candidate in completing a critical step, which had been missed. Despite this, the instructor marked all steps satisfactory and passed the candidate overall. Initially, SRNS training management defended the practice of performing multiple JPMs concurrently (allowed by site procedures), instructors assisting candidates during JPMs, the use of subjective grading criteria, and the ability to fail a critical step and still pass. Although these classes and JPMs are taught on a weekly basis, DOE stated that they have not had anyone attend or audit any of them over the last two years. After reiterating the concerns to site training management on three occasions while observing marginal improvements, the RIs held a meeting with DOE and site training management on 8/18/22. At that meeting, SRNS training management agreed with the previously contested administrative and process deficiencies identified by the RIs. They agreed to evaluate and improve the respiratory training program to bring it into compliance with site procedures, including reducing the student to trainer ratio for JPMs to 1:1, not allowing candidates to pass the JPM if they fail a critical step, and removing the allowance for subjective grading and teaching by the instructor during the evaluations.