DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 12, 2026

Sandia National Laboratories (SNL) Cognizant Engineer Report for May 2026

Staff Activity: The Board's staff did not conduct onsite activities in May.

Readiness: Earlier this quarter, personnel from National Technology and Engineering Solutions of Sandia, LLC (NTESS) performed proficiency demonstrations for testing explosive-containing neutron generators at the Annular Core Research Reactor (ACRR). SNL policy—which is derived from requirements in DOE Order 425.1E, *Verification of Readiness to Startup or Restart Nuclear Facilities*—dictates that activities must be performed annually to remain on an approved list. Since a planned test of these neutron generators was delayed from March to August (i.e., greater than one year from the previous experiment), a proficiency demonstration was required to maintain this capability on the list. Since many aspects of working with explosive neutron generators are the same as for other experiments, demonstrations focused on unique tasks (e.g., posting areas for explosives and maintaining a special facility access list) and high-hazard activities (e.g., hoisting and rigging of simulated experimental packages). In the course of performing and evaluating the activities, NTESS self-identified that some aspects of the proficiency demonstration did not meet expectations and conducted a second demonstration five days later with fewer simulations. On April 21, the Sandia Field Office (SFO) manager determined proficiency based on the second iteration of demonstrations. The SFO letter also requested a meeting with NTESS to discuss opportunities for improvement, given the need to conduct two demonstrations.

Safety Basis – Sandia Pulsed Reactor Facility: In late April, NTESS personnel declared a potential inadequacy of the safety analysis due to a misalignment between language related to a safety-basis control and the procedures implementing the control. The facility has procedures in place for emergency response actions following fires, specifically related to facility access and prohibitions on using water to fight fires in the reactor room (due to the possibility of an inadvertent nuclear criticality). While the procedures in place are generally adequate, some legacy language in the safety basis had not been updated to reflect the desired firefighting posture. On May 5, 2026, NTESS personnel determined that this misalignment represented an unreviewed safety question and instituted temporary compensatory measures, including a reduction in the allowable combustible loading.

Radiological Control: On May 21, 2026, a worker entered a radiation area at ACRR without proper dosimetry, while being escorted by a worker who did have a dosimeter and the correct access authorization. The area had recently been posted as a radiation area in preparation for radiation testing activities, though those activities had not yet begun. Upon identifying the unauthorized entry, preparatory work was temporarily halted, and radiological protection personnel evaluated the worker and determined there was no radiological exposure. This is the latest in a series of violations of posted radiological boundaries at ACRR this year (see SNL report for March 2026).