

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 5, 2025

TO: Technical Director
FROM: Sandia National Laboratories (SNL) Cognizant Engineer
SUBJECT: SNL Report for August 2025

Defense Nuclear Facilities Safety Board (Board) Staff Interactions: From August 18 to 20, 2025, members of the Board's staff were on site to observe the 2025 annual emergency exercise.

Evaluation of the Safety of the Situation (ESS) for the Annular Core Research Reactor (ACRR): On July 28, 2025, the Sandia Field Office (SFO) raised questions regarding the July 17, 2025, ESS submitted in response to a Potential Inadequacy of the Safety Analysis (PISA) and a positive Unreviewed Safety Question Determination related to potential worker consequences from the rupture of waterlogged ACRR fuel elements (see SNL Monthly Reports for [June 2025](#) and [July 2025](#)). SFO required an additional operating restriction to evacuate the ACRR Facility high bay during all pulse operations until its questions are resolved. On August 14, 2025, the National Technology and Engineering Solutions of Sandia, LLC (NTESS) resubmitted the ESS to SFO. The resubmitted ESS included an immediate safety assessment that addressed several of the questions raised by SFO. The ESS also provided additional safety analyses and plans to restore facility compliance with the approved Documented Safety Analysis (DSA). The ESS safety analyses recommended modifying several sections of the DSA hazard evaluation and Technical Safety Requirements to resolve the PISA. The resubmitted ESS concluded that "the facility is in a safe condition, operating under restrictions per management directives and existing procedures and programs to reduce the potential radiological exposure of facility workers after a multi-fuel element rupture event." SFO is evaluating the resubmitted ESS.

2025 Annual Emergency Exercise: On August 19, 2025, NTESS emergency management personnel conducted the 2025 annual emergency exercise in Building 858, the Microsystems Engineering, Science, and Applications facility. The exercise encompassed a motorized dolly malfunction and fire that resulted in a simulated release of hydrofluoric acid, exposing or contaminating eight workers—one of whom was also injured during the dolly malfunction. The SNL Emergency Operations Center, Emergency Medical Services, Protective Force Officers, and the Sandia Field Office were among the participants in the exercise. Kirtland Fire and Emergency Services provided emergency response at the scene and operated the incident command post. In addition, the City of Albuquerque, the State of New Mexico, and the Department of Energy Watch Office also provided limited participation in the exercise. NTESS emergency management staff members are currently finalizing the after-action report for this exercise.

Fourth Quarter Fiscal Year (FY) 2025 Startup Notification Report (SNR): On August 6, 2025, SFO approved the fourth quarter FY 2025 SNR. In the approval letter, SFO noted its completion of an evaluation of the ACRR Proficiency Demonstration for Experiments with Hazard Category 3 (HC-3) quantities of fissionable material, which was performed on June 17, 2025. As stated in the letter, SFO determined that "proficiency for HC-3 experiments at the ACRRF can be extended to June 2026." SFO also completed its evaluation of the NTESS FY 2025 Quarter 4 Facility Routine Activities list and identified three additional activities that were last performed in 2024. SFO requested a meeting with NTESS to discuss additional details for these remaining activities to determine how proficiency will be demonstrated. The SNR for the fourth quarter of FY 2025 identified no new readiness activities within the next twelve months.