

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Sandia National Laboratories (SNL) Report for August 2024

Department of Energy (DOE) Office of Enterprise Assessment (EA) Independent Assessment of the SNL Emergency Management Program: In August 2024, DOE EA issued an independent assessment of the SNL emergency management program. The assessment evaluated the effectiveness of National Technology and Engineering Solutions of Sandia, LLC (NTESS), and the Sandia Field Office (SFO) in managing and maintaining the SNL emergency management program. EA evaluated selected elements of the emergency management program including capabilities, plans and procedures, technical planning basis, and exercises and issues management under readiness assurance. The EA report cited three strengths and included ten findings. The assessment noted that SFO and NTESS have made progress in self-identifying gaps in their emergency management program and taken steps to make improvements and mitigate known issues, including establishing a base support agreement with Kirtland Air Force Base, a memorandum of understanding with Kirtland Fire and Emergency Services, reorganization and acquisition of personnel and resources, and the construction of a new Emergency Operations Center. However, the assessment also identified a number of areas of concern, summarized in the four NTESS findings associated with exercise planning and execution, emergency plan updates, and hazard identification. In addition, the EA report noted six SFO findings addressing effective oversight, procedure development, and corrective actions. EA plans to conduct a follow-up effectiveness-based assessment (programmatic and exercise performance evaluation) during either fiscal year 2025 or 2026.

Updating Technical Area V (TA-V) Technical Safety Requirements (TSRs): On July 31, 2024, NTESS submitted a proposal for updating the TA-V TSRs to reflect a Sandia Independent Review and Appraisal System (SIRAS) restructure. The proposal changes an administrative control in three TA-V TSRs and requests SFO approval of these changes. The TSRs for all three TA-V nuclear facilities credit the SIRAS as an administrative control. SIRAS met the requirements of DOE Order 5480.6 *Safety of Department of Energy-Owned Nuclear Reactors* (1986) and has been maintained as a best-management practice since the Order was cancelled in 1995. SIRAS, which includes the Nuclear Facilities Safety Committee (NFSC) and its three sub-committees, provides an independent and objective safety review of all matters brought to the committees and makes recommendations to the nuclear facilities management team. NTESS stated that the restructure replaces the SIRAS committees with one committee, the TA-V Nuclear Safety Review Committee (NSRC). On August 12, 2024, SFO approved the changes in administrative control establishing the NSRC in the three TSRs noting that the restructure meets the intent of the Enhanced Mission Delivery Initiative. SFO requested that NTESS provide drafts of the revised TSRs to the SFO Assistant Manager for Engineering by October 31, 2024.

Request for Chief of Defense Nuclear Safety (CDNS) Review of the Combined Radiation Environments for Survivability Testing (CREST) Safety Design Strategy (SDS): On August 13, 2024, SFO requested CDNS review of the CREST SDS, which is currently undergoing review by the Safety Basis Review Team. The CREST SDS will be submitted as part of the Conceptual Design Review package for obtaining Critical Decision 1 (CD-1) approval. SFO requested the CDNS written review letter by September 12, 2024, to support the project schedule.