

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 5, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer  
**SUBJECT:** Sandia National Laboratories (SNL) Report for July 2022

**Fourth Quarter Fiscal Year 2022 Startup Notification Report (SNR):** On July 5, 2022, National Technology and Engineering Solutions of Sandia, LLC (NTESS) submitted the fourth quarter Fiscal Year 2022 SNR. NTESS noted that the proposed and notional schedules for activities requiring readiness reviews included only minor changes since the third quarter SNR. NTESS determined that two activities planned for the Technical Area-V nuclear facilities in the next twelve months will require readiness reviews. NTESS plans to complete the contractor readiness assessment (CRA) for *Class III Experiments with Hazard Category (HC-3) Quantities of Fissionable Material* in August 2022 and the CRA for *Transient Rod Withdrawal (TRW) Operations* in December 2022. The SNR noted that the Sandia Field Office (SFO) will complete a federal readiness assessment for TRW operations in February 2023. On July 25, 2022, SFO agreed with the readiness level determination for the two activities and approved the fourth quarter Fiscal Year 2022 SNR.

**Management Self-Assessment (MSA) for Class III Experiments at the Annular Core Research Reactor Facility (ACRRF):** In preparation for the CRA for Class III experiments with Hazard Category (HC)-3 quantities of fissionable material, NTESS completed an MSA to evaluate readiness to restart these experiments. The scope of the MSA included a review of the processes, procedures, equipment, and training for the experiments. Upon completion of their assessment, the MSA team concluded that all criteria were met with no pre-start or post-start findings. The MSA team identified twelve observations as significant recommendations and six observations as opportunities for improvement. The MSA team also highlighted seven noteworthy practices. NTESS will employ the TA-V configuration management tool, Quality Information Network (QuIN), to develop a condition report to track corrective actions taken to address the observations in the MSA Final Report. The CRA for Class III experiments at the ACRRF will begin on August 8, 2022.

**Mixed Waste Landfill (MWL) – Annual Long-Term Monitoring and Maintenance Report (April 2021 – March 2022):** NTESS submitted the ninth *Mixed Waste Landfill Annual Long-Term Monitoring and Maintenance Report, April 1, 2021 – March 31, 2022*, to the New Mexico Environment Department. The report documents the long-term monitoring, inspection, and maintenance activities conducted at the MWL during the reporting period. The report noted that sampling activities for this reporting period included two semiannual monitoring events each for groundwater, radon, and soil vapor with annual soil-moisture monitoring conducted in April 2021, and annual tritium surface soil sampling and annual biota sampling conducted in August 2021. All monitoring activities were conducted in accordance with Long-Term Monitoring and Maintenance Plan (LTMMP) requirements, and no monitoring results exceeded LTMMP trigger levels. All monitoring results were consistent with historical MWL monitoring data. The report also noted that inspections of the MWL final cover system, stormwater diversion structures, compliance monitoring systems, and security fence were performed in accordance with LTMMP requirements and that required maintenance and repairs were minor and completed during or shortly after the inspections. The report concluded that all LTMMP requirements have been met for the April 1, 2021, through March 31, 2022, reporting period and that based upon monitoring, inspection, and maintenance results, the evapotranspirative cover and monitoring systems are functioning as designed and site conditions remain protective of human health and the environment.