

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 6, 2022

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

Defense Nuclear Facilities Safety Board (Board) Staff Interactions: On April 26, 2022, a Board's staff review team conducted a video teleconference with the Sandia Field Office (SFO) to discuss the review and approval process for safety basis documents. The staff team reviewed the field office's procedure associated with reviewing and approving safety basis documents and compared the procedure to the requirements and guidance in Department of Energy (DOE) Standard 1104-2016, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*. The staff team discussed their lines of inquiry with SFO personnel and management. A member of the DOE Departmental Representative staff also participated in the video teleconference. The Board's staff completed this review as part of a complex-wide evaluation of field office review and approval of safety basis documents.

Fact-Finding for a Handrail Dropped into the Annular Core Research Reactor Facility (ACRRF) Fuel-Ringed External Cavity, Version II (FREC-II) Cavity: On April 6, 2022, National Technology and Engineering Solutions of Sandia, LLC (NTESS) Environment, Safety, and Health staff members issued a fact-finding report entitled, "*Event Fact-Finding Report for the Handrail Dropped into a Research Reactor FREC-II Cavity in Shutdown Mode.*" This event occurred on March 15, 2022, when an ACRRF staff member loosened a connection point and an 18-inch by 48-inch L-shaped cross member fell, hit the deck plate, and dropped into the FREC-II cavity (see SNL Monthly Report for March 2022). NTESS staff members conducted causal analysis meetings for this event on March 30, 2022, and April 7, 2022, using the results of the fact-finding report. The Board's staff will review the causal analysis report and the corrective actions taken to address this event.

Third Quarter Fiscal Year 2022 Startup Notification Report (SNR): On April 11, 2022, SFO approved the Third Quarter Fiscal Year 2022 SNR. NTESS determined that two activities planned for the Technical Area-V nuclear facilities in the next twelve months will require readiness reviews. SFO agreed with the readiness level determination for the two activities and approved the submitted SNR for the third quarter of fiscal year 2022, with some conditions. In addition, SFO noted two activities for which NTESS determined no readiness reviews are required (*Class III Experiments with Less-Than-HC-3 Quantities of Fissionable Material*, and *Reactor Operations Activities to Support Neutron Radiography*). SFO suggested Level 3 Checklist Readiness Activity assessments may be needed for each of these activities.

ACRRF Safety Basis - Change Notice 15 (CN 15): On April 11, 2022, SFO approved the ACRRF Safety Basis Annual Update CN 15 with a Safety Evaluation Report Addendum. SFO approved the proposed page changes for CN 15 with no conditions of approval, noting that the ACRRF safety basis continues to provide reasonable assurance of adequate protection to the workers, the public, and the environment from the identified hazards associated with its operation, and meets the requirements specified in 10 CFR 830, Subpart B, *Safety Basis Requirements*. SFO directed NTESS to complete an Implementation Verification Review to confirm implementation of the approved CN 15 within 120 calendar days.