

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 7, 2023

TO: Katherine Herrera, Acting Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Sandia National Laboratories (SNL) Report for June 2023

Defense Nuclear Facilities Safety Board (Board) Interactions: On June 21–22, 2023, the Board’s cognizant engineer for SNL conducted routine nuclear safety oversight and met with National Technology and Engineering Solutions of Sandia, LLC (NTESS) and Sandia Field Office (SFO) managers and staff. The cognizant engineer walked down facilities in Technical Area V (TA-V) including: the Annular Core Research Reactor Facility (ACRRF), Auxiliary Hot Cell Facility (AHCF), Sandia Pulsed Reactor/Critical Experiment Facility, and the Gamma Irradiation Facility. The cognizant engineer met with the TA-V Quality Assurance Manager, the TA-V Safety Basis Manager, the TA-V Engineering Manager, and the AHCF Manager and received status updates on current activities in each department/facility. The cognizant engineer also had discussions with the SNL Center 1300 Director, and the SFO Manager, Deputy Manager, Senior Technical Safety Advisor and other SFO staff.

ACRR Pool Water Resistivity and Pool Stratification: On June 2, 2023, SFO approved the Evaluation of the Safety of the Situation (ESS) and Justification for Continued Operations (JCO) for the Potential Inadequacy of the Safety Analysis (PISA) for ACRRF reactor pool water resistivity and pool stratification (see SNL Monthly Report for May 2023). SFO completed its review of the ESS and JCO for the PISA in accordance with Department of Energy Standard 1104-2016, *Review and Approval of Nuclear Facility Safety Basis Documents*. SFO concurred with both the PISA declaration and positive Unreviewed Safety Question Determination. SFO noted that the combined ESS/JCO indicated that the compensatory measures issued on April 25, 2023, by NTESS are appropriate for the condition, based on current sampling information. SFO approved the combined ESS/JCO and requested that NTESS develop a plan to investigate the cause of the fuel cladding corrosion in the ACRR pool within 120 days. In addition, SFO directed NTESS to submit a revised JCO, if the compensatory measures change.

Closure of the Condition of Approval (COA) for Reactor Protection Controls (RPC) for ACRRF: On June 28, 2023, SFO notified the National Nuclear Security Administration’s (NNSA) Cognizant Secretarial Officer (CSO) for Safety of the closure of the COA for RPCs for the alternate methodology for the ACRRF Documented Safety Analysis and Technical Safety Requirements. The CSO had approved the proposed alternate methodology on March 26, 2020, based on a review conducted by the NNSA Central Technical Authority and a team of qualified nuclear safety specialists who reported to the CSO. SFO provided guidance for RPCs to NTESS on May 3, 2023, and NTESS agreed with the guidance (See SNL Monthly Report for May 2023). SFO noted that the issuance of this guidance, prior to approval of the Safety Basis Review Plan, closes the COA and that the guidance will be incorporated into the Safety Basis Review Plan, when prepared.

SNL Site-Wide Environmental Impact Statement (SWEIS): On June 5, 2023, the initial scoping public comment period for the SNL SWEIS closed. The SNL SWEIS will analyze the potential environmental impacts of the reasonable alternatives for continuing operations of SNL for approximately the next 15 years. While SNL has operations outside of New Mexico, the SNL SWEIS is limited to activities at SNL within Kirtland Air Force Base and the Albuquerque area. The public participated in the SNL SWEIS process by providing comments on the scope of analysis, including the range of alternatives, associated actions, and environmental issues that should be considered in the SNL SWEIS. Following the scoping process, and after consideration of comments received during scoping, NNSA will prepare a Draft SNL SWEIS. NNSA anticipates issuing the Draft SNL SWEIS to the public in 2024.