

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 2, 2016

**TO:** Steven A. Stokes, Technical Director  
**FROM:** Douglas J. Brown, Cognizant Engineer  
**SUBJECT:** Sandia National Laboratories Report for November 2016

**Staff Activity at Sandia National Laboratories (SNL).** On November 15-17, 2016, the Defense Nuclear Facilities Safety Board's (Board) SNL Cognizant Engineer and Operations Oversight Engineer conducted a quarterly cognizant engineer site visit. During this same timeframe, two additional Board staff members attended weapons engineering professional development courses conducted by SNL.

**Conduct of Operations and Maintenance Review Closeout Briefing via Teleconference.** On November 4, 2016, the closeout briefing to senior Sandia Field Office (SFO) and SNL personnel was held to communicate issues and observations identified while the Board's staff team was on site during the week of September 19, 2016. The closeout briefing addressed programmatic elements and field implementation of the conduct of operations and maintenance programs within Technical Area V (TA-V) and corrective actions developed and implemented to address issues documented in a letter from the Board from May 2014.

**Sandia Pulsed Reactor Facility (SPRF) – Safety Basis Documentation.** On November 8, 2016, SFO issued their Safety Evaluation Report Addendum to the *Sandia Pulsed Reactor Safety Basis 2015 Annual Update (Change Notice 8)*. SFO independently reviewed the Unreviewed Safety Question Determinations and Screens, and the proposed page changes in the SPRF Safety Basis 2015 Annual Update. SFO concluded that the page changes making up the SPRF 2015 Annual Update continues to meet the requirements specified in Title 10, Code of Federal Regulations, Part 830, Subpart B, *Safety Basis Requirements*.

**Quarterly Cognizant Engineer Site Visit.** On November 15-17, 2016, the SNL Cognizant Engineer and Operations Oversight Engineer provided three days of oversight and interaction in Technical Area V (TA-V). The Board's staff team held group discussions with personnel from SFO Safety System Oversight, SNL Radiation Protection, TA-V Safety Basis, TA-V Applied Nuclear Technologies, and TA-V Quality/Systems Engineering. The Board's staff held individual discussions with the TA-V senior manager, TA-V reactor operations manager, TA-V nonreactor operations manager, SFO facility representative, and SFO Assistant Manager for Engineering. The Board's staff team also conducted a walkdown of several facilities in conjunction with weekly maintenance rounds in TA-V. Lastly, the Board's staff team attended an SFO weekly operations call, a corporate safety basis meeting, and a causal analysis for issues related to a radioactive waste transfer.

**Annular Core Research Reactor Facility (ACRRF) – Safety Rod 1 Issue.** On November 18, 2016, ACRR personnel were performing annual fuel element inspections using an underwater camera when they discovered 1 of 3 bolts at the lower connecting rod of Safety Rod 1 (SR1) was backed out. The associated nut and washer were missing. An extent of condition inspection was performed on the other rods and found all remaining nuts and bolts were intact. Programmatic operations will remain suspended until the SR1 is repaired.