

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 1, 2017

**TO:** Steven A. Stokes, Technical Director  
**FROM:** Douglas J. Brown, Cognizant Engineer  
**SUBJECT:** Sandia National Laboratories Report for November 2017

**Staff Activity at Sandia National Laboratories (SNL).** On November 6-10, 2017, a Defense Nuclear Facilities Safety Board's (Board) staff member observed a new series of pipe over-pack container fuel pool fire tests at Sandia's Thermal Test Complex. On November 15-16, 2017, a Board's Resident Inspector attended two Weapons Engineering Professional Development Courses. On November 28-30, 2017, the Board's SNL Cognizant Engineer conducted a quarterly cognizant engineer site visit to include oversight and interaction with SNL and Sandia Field Office (SFO) personnel.

**Auxiliary Hot Cell Facility (AHCF) – Safety Basis Documentation.** On November 1, 2017, SFO issued their Safety Evaluation Report Addendum for the *Auxiliary Hot Cell Facility Safety Basis 2017 Annual Update, (Change Notice 10)*. SFO concluded that the AHCF Safety Basis 2017 Annual Update meets the annual requirement for submittal of an updated documented safety analysis as specified in Title 10, Code of Federal Regulations, Part 830, Subpart B, *Safety Basis Requirements*. No conditions of approval were identified during the review.

**Annular Core Research Reactor (ACRR) Pulse Power Discrepancy Update.** As discussed in the October 2017 monthly report, SNL continued troubleshooting the pulse power discrepancy with the assistance of a contracted instrumentation technician. During testing, a degradation of detector sensitivity was identified in one channel detector and multiple spare detectors. A revision to the detector calibration procedure was developed and reviewed by the safety committee to align the pulse power channels and restore pulse power programmatic operations, which remain suspended. The long-term corrective action will require detector replacement.

**ACRR – Reactivity Control System Upgrade (RCSU) Update.** On November 10, 2017, ACRR personnel completed the sixth and final short-term shutdown for preliminary testing of the new RCSU interface. A major shutdown and final transition to a new control system is currently schedule to commence in late February 2018. A Federal Readiness Assessment is expected in the latter half of 2018 to authorize start-up and resumption of programmatic operation.

**AHCF – Safety Basis Documentation.** On November 17, 2017, SFO issued their Safety Evaluation Report Addendum for the *2017 Interim Page Change to the Auxiliary Hot Cell Facility Basis for Interim Operations and Technical Safety Requirements (Change Notice 9.1)*. The proposed changes contained in the AHCF 2017 Interim Page Change update the process for operations that require handling and processing of components of considerable length/height in support of Campaign 16 and 18. SFO concluded that the AHCF Safety Basis continues to provide reasonable assurance of adequate protection to the workers, the public, and the environment from the identified hazards and meets the requirements. No conditions of approval were identified during the review.