

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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TO: Christopher J. Roscetti, Technical Director
FROM: Douglas J. Brown, Ph.D., Cognizant Engineer (Outgoing)
Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer (Incoming)
SUBJECT: Sandia National Laboratories (SNL) Report for June 2018

Defense Nuclear Facilities Safety Board (Board) Staff Activity: The Board's staff provided three person-weeks of on-site oversight at SNL during June 2018. During the week of June 19–21, 2018, the Board's cognizant engineers were on site as part of the Board's staff team reviewing the electrical systems in Technical Area V (TA-V). In addition, the Board's outgoing cognizant engineer met with Sandia Field Office (SFO) staff, SNL staff, members of the Annular Core Research Reactor (ACRR) Contractor Readiness Assessment (CRA) team, and senior members of the Federal Readiness Assessment (FRA) team to discuss routine nuclear safety oversight items.

ACRR Reactivity Control System Upgrade (RCSU) Update: On June 14, 2018, SNL issued the RCSU Management Self-Assessment (MSA) report. The MSA team concluded that the MSA scope and purpose were achieved. It also concluded that Integrated Safety Management and Safety Management Programs (SMP) are embedded within the TA-V Management Program, implemented through TA-V procedures, and were flowed into the RCSU Project appropriately. The MSA team also concluded that SMPs are implemented and effective. While the MSA report included four pre-start and six post-start findings, the MSA results indicated no safety concerns and that the project resulted in a system that is completely within the bounds of the ACRR safety basis with properly implemented safety controls. SNL entered the pre-start findings into the TA-V Condition Reporting System with associated corrective actions that were completed prior to the CRA, which began in late June 2018. SNL completed the CRA on June 28, 2018, the results of which will be available in early July 2018. SFO is currently scheduled to begin the FRA on July 30, 2018.

Technical Area V Electrical Systems Review: On June 19–20, 2018, a Board's staff team conducted a review of the design and condition of electrical distribution equipment supporting nuclear operations in TA-V. The Board's staff team also reviewed TA-V electrical system design supporting calculations (load flow analysis, short circuit analysis, protective device coordination analysis, cable sizing analysis, and arc flash studies) to verify that the existing system incorporates the conclusions of these calculations. In addition, the Board's staff team reviewed the design and condition of the TA-V lightning protection and grounding systems. The Board's staff team found no major issues with the TA-V electrical system and will continue routine oversight to monitor the response of SNL to the minor items identified in this review.

Sandia Field Office Technical Qualification Program (TQP) Re-Accreditation: The Department of Energy (DOE) established the TQP as a process to ensure Federal technical employees possess the necessary knowledge, skills, and abilities to perform their assigned duties and responsibilities. The accreditation of a site's TQP program provides the site manager with additional assurance that the program is functioning as intended. In June 2018, the SFO's TQP was successfully re-evaluated for accreditation by an independent team from DOE and NNSA. SFO is the first DOE Office to seek accreditation for the third time. The final DOE determination on re-accreditation will not be made for two to three months.