

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 7, 2018

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

Defense Nuclear Facilities Safety Board (Board) Staff Activity: There were no onsite Board staff reviews or oversight visits at SNL in August 2018.

Technical Safety Requirement (TSR) Violation of Fire Protection Program in Technical Area V (TA-V): On August 2, 2018, SNL reported a TSR violation of the Fire Protection Program in TA-V. The violation resulted from a series of events related to fire alarm notifications that occurred at Technical Area V (TA-V). SNL conducted a site-wide Emergency Management Exercise at TA-V on July 25, 2018, and another TA-V fire alarm and accountability test on July 30, 2018. These tests raised concerns about the full functionality of fire alarms, the feedback and issues communications mechanism between the line organization and cognizant support organizations, the Fire Protection Program's ability to coordinate with other Safety Management Programs (e.g., Emergency Management, Maintenance, and Configuration Management), and the process for declaring and controlling impairments and instituting compensatory measures. SNL determined that these issues taken together constituted a systemic failure of the Fire Protection Program at TA-V. The Senior Manager at TA-V declared a TSR violation for the three nuclear facilities within the TA-V footprint (the Annular Core Research Reactor (ACRR) facility, the Sandia Pulsed Reactor (SPR) facility, and the Auxiliary Hot Cell Facility (AHCF)) in accordance with the Technical Safety Requirements for the TA-V nuclear facilities. SNL paused all work within TA-V and restricted access to TA-V except for required security checks and periodic facility inspections pending development of compensatory measures and actions.

Impacts of the TSR Violation in TA-V: SNL personnel canceled the August criticality classes at the SPR facility, delayed the loading of Campaign 19 materials into shielded containers at AHCF, and delayed the ACRR Reactivity Control System Upgrade (RCSU) Federal Readiness Assessment (FRA) due to the TA-V access limitations resulting from the TSR violation for the fire protection program. Following the implementation of compensatory measures, some activities at TA-V have resumed. The RCSU FRA is now scheduled to begin on September 10, 2018.

Mixed Waste Landfill (MWL) Annual Report: On August 17, 2018, the Board's cognizant engineer for SNL received the *Mixed Waste Landfill Annual Long-Term Monitoring and Maintenance Report, April 2017 – March 2018*. This report provides information documenting the long-term monitoring, inspection, and maintenance activities conducted at the MWL during the reporting period. In support of this report, SNL conducted annual soil moisture monitoring in April 2017 and annual surface soil sampling for tritium and annual biota sampling for metals and radionuclides in August 2017. The report noted that all monitoring activities were conducted in accordance with MWL Long-Term Monitoring and Maintenance Plan (LTMMP) requirements, no monitoring results exceeded LTMMP trigger levels, and all monitoring results were consistent with historical MWL monitoring data. SNL concluded that based upon monitoring, inspection, and maintenance results, the evapotranspirative cover and monitoring systems are functioning as designed and that site conditions continue to protect human health and the environment.