

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 2, 2016

TO: Steven A. Stokes, Technical Director
FROM: John R. Mercier, Cognizant Engineer
SUBJECT: Sandia National Laboratories Report for August 2016

Staff Activity at Sandia National Laboratories (SNL). There were no onsite Defense Nuclear Facility Safety Board (Board) staff reviews or oversight visits in August.

Radiation Levels in the Annular Core Research Reactor Facility (ACRR) High Bay Areas: Dating back to July, 2015, SNL determined that radiation areas exist in the ACRR High Bay during steady state operations (1%-10% power) due to a change in shielding configuration to support researcher experiments. SNL continues to characterize the radiation levels in ACRR High Bay areas for the varying reactor operating configurations. SNL prioritization of other testing commitments has resulted in the lengthy and intermittent conduct of the High Bay characterization work.

Sandia Pulse Reactor Facility (SPRF)–Fire Safety. The National Nuclear Security Administration's Sandia Field Office has been working with Kirtland Air Force Base (KAFB) Fire and Security personnel to update the Memorandum of Understanding regarding fire and security response for the Sandia National Laboratories, New Mexico facilities. The document is currently in routing with SFO management and, when approved, will be provided to KAFB for their final review and approval.

Sandia Pulse Reactor Facility (SPRF)–Training. During the week of August 22, 2016, the SPRF staff administered phase 2 (Hands-On) training to seven Department of Energy engineers, two interagency engineers, one engineer from industry and three international engineers. This training is a significant component of the formal Nuclear Criticality Safety Program sponsored by DOE and is aimed at qualifying nuclear criticality safety engineers.

Z-Machine Experiment. During the week of August 1, 2016, SNL performed their first tritium experiment with the Z-Machine. The experiment demonstrated successful containment of microcurie quantities of tritium subject to a Z-Machine high energy pulse.