

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 12, 2023

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** A. Boussouf and D. Gutowski, Resident Inspectors  
**SUBJECT:** Los Alamos Activity Report for the Week Ending May 12, 2023

**Staff Activity:** N. Huntington and E. Tetteh were on site to attend a training course on DOE-STD-5506, *Preparation of Safety Basis Documents for Transuranic Waste Facilities*, sponsored by the DOE Office of Environmental Management. A. Boussouf was at the Pantex Plant providing resident inspector coverage. Y. Li attended a meeting in Walnut Creek, CA regarding the update to the Los Alamos Probabilistic Seismic Hazard Analysis.

**Area G–Emergency Response:** On Monday, workers in Area G smelled a solvent-like odor in Dome 230 and later reported symptoms. Area G personnel entered their emergency response procedure, and the Los Alamos Fire Department and Triad Emergency Management personnel responded. Other than an initial miscommunication on dose rates, responders detected no abnormal chemical or radiological activity. Later in the week, N3B personnel developed a recovery plan to reenter Dome 230 and confirm that there was no evidence of a breached transuranic waste drum or other hazards. The plan included a slow entry while monitoring for chemical and radiological conditions. It included surveys of potentially reactive drums, designated locations in the dome, and a selection of other drums. They performed an initial dome entry on Thursday afternoon and found no abnormal chemical radiological readings. The dome is still restricted while more samples are being collected and analyzed.

**Plutonium Facility–Criticality Safety:** In April, Triad nuclear criticality safety personnel issued a revised technical basis for credible water accumulation in the vault due to fire sprinkler activation (see 2/17/2023, 3/3/2023 reports). The new calculations have a maximum flooding depth of 5.7’; the previous revision had 4’. Last week, Triad personnel suspended vault activities. Vault activities were already limited due to the previous revision of the water accumulation technical basis, and Triad personnel are evaluating whether current operational restrictions are adequate for the new flooding depth. Triad has been developing a process to address unknowns in nuclear criticality safety space similar to the unreviewed safety question process used for safety basis. This process is still under development, and this latest question regarding water depth in the vault was used as a pilot activity to support finalizing the process.

**Plutonium Facility–Infrastructure:** Last Friday, the Plutonium Facility entered standby mode, which curtails allowable work activities, to support two planned safety system upgrade activities. One is the cutover to the new Facility Control System. This process requires periodic securing of ventilation fans. The second upgrade activity involves the south fire riser, which will put part of the fire suppression system out of service.

Triad transmitted to the NNSA Field Office for formal review, the draft preliminary documented safety analysis (PDSA) for the Los Alamos Pit Production Project 30 reliable mission. The PDSA is based on the 30% design review and evaluates changes associated with the 30 reliable mission.