DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 12, 2018

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending October 12, 2018

Safety Basis: Once removed from an engineered structure, transuranic waste containers (drums and standard waste boxes) provide the only means to reliably confine radioactive materials. Containers can be handled outdoors at the Plutonium Facility, Chemistry and Metallurgical Research (CMR) building, Transuranic Waste Facility (TWF), Radioactive Liquid Waste Treatment Facility (RLWTF), RANT Shipping Facility, Waste Characterization Reduction and Repackaging Facility (WCRRF), and Area G. The resident inspectors compared the treatment of transuranic waste containers in the technical safety requirements (TSR) across these facilities knowing that waste containers routinely move between these facilities and are subject to a number of potential degradation mechanisms. The TSR provides the specific parameters and requisite actions for the safe operation of a nuclear facility.

The comparison revealed differences in the actions required by facility management upon discovery of a degraded container. For example, the TSR for TWF contains limiting conditions for operation (LCO) that require operators to overpack a degraded container into a compliant container or remove it from the facility within 7 calendar days. At the Plutonium Facility, waste containers are considered design features and failure of an in-service inspection of a container triggers consideration as a potential inadequacy of the safety analysis—a process that under current local procedures may take up to 15 calendar days. At Area G, the TSR also considers waste containers as design features, but dictates the need to overpack a degraded container into a metal container without a time requirement as part of the Hazardous Material and Waste Management Program. The TSRs for CMR and RLWTF do not address waste containers. RANT and WCRRF are currently not operating. In practice, facility management typically addresses degraded containers in a prompt manner; however, LANL management had identified the need to strengthen consistency across the TSRs and create LCO-like actions statements for design features as part of an earlier Safety Basis Improvement Plan (see 6/5/2015 report).

Area G–Safety Basis: On Tuesday, N3B personnel conducted a fact-finding to re-evaluate an incident that occurred in July where a worker brought a vehicle into a Combustible Restrictive Area without first notifying the Operations Center contrary to a procedure. In July, N3B management concluded that this incident represented a procedural violation; however, subsequent review by N3B safety basis and engineering personnel questioned whether this actually represented a TSR violation because the necessary surveillance to ensure compliance with combustible liquid limits was not performed at the proper time (i.e., before the vehicle entered the area). After a healthy discussion on the challenges interpreting the existing safety basis, N3B management concluded that the event constituted a TSR violation. The long-term solution to this type of confusion will be implementation of the new documented safety analysis (see 2/23/2018 report); however, the EM Field Office approval date has been delayed from previous schedules and N3B's overall implementation strategy remains in development.