

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 11, 2011

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B.P. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending February 11, 2011

**Federal Oversight:** All of the issues discussed in this report were initially identified and pursued by NNSA site office facility representatives and subject matter experts.

**Transuranic Waste Operations – Criticality Safety:** In response to concerns raised by NNSA site office personnel, a laboratory team recently reviewed the adequacy and implementation of criticality safety controls at Area G. This week, the team comprised of lab criticality safety engineers and institutional criticality safety committee members provided a briefing to site office and LANL management on the results of their review. The team concluded that Area G compliance with the institutional criticality safety program is immature. As a result of this immaturity, the team identified three criticality safety infractions during their review. Two infractions were declared because sludge and debris waste remediation operations at Area G had not been formally reviewed by criticality safety personnel, as required. Another infraction was declared because procedures governing the staging of drums for characterization activities did not ensure the segregation and special control of drums exceeding 200 fissile gram equivalents as required by established criticality safety limits (site rep weekly 1/28/11).

**Weapons Engineering Tritium Facility (WETF):** An ongoing NNSA site office review of facility status control evaluated a sampling of work packages used by facility personnel over the past year to make modifications to the safety significant Tritium Waste Treatment System (TWTS). Each of the packages reviewed were found to have various deficiencies, which taken together indicate significant weaknesses in conduct of operations and configuration management. Among other things, the review found that key documents, such as the System Alignment Checklist were not updated as required after new valves were installed; the required Return-to-Service checklist process was not used prior to restoring TWTS status to operable after modifications; and required material qualification certifications of credited components were not performed prior to installation.

**Transuranic Waste Operations – Safety Basis:** Yesterday, based on an issue identified by an NNSA Facility Representative, WCRR repackaging facility management reported a TSR violation based on a surveillance requirement that had not been successfully performed within its required frequency. The WCRR fire suppression system is credited as a safety significant control. WCRR TSRs include a surveillance requirement to perform a monthly valve alignment inspection to ensure an open flow path exists between water tanks and the facility fire suppression system. In performing this surveillance, facility personnel rely on affirmation from the institutional utilities group that three credited valves in the water distribution system are in the open position. The utilities group performs visual valve inspections on a nominally monthly basis, but execution of this work can and sometimes does slip beyond the frequency required by the WCRR TSRs.

When informed that the valve inspection by the utilities group had not been performed within the required interval, WCRR management had the valves inspected and all were found in the required open position. In response to this discovery, facility management intends to revise the WCRR surveillance procedure to require facility personnel to perform the credited valve inspection.