

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 27, 2008

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending June 27, 2008

Davis was off site this week. The staff held a video-teleconference on software quality assurance.

Plutonium Facility: Last week, facility personnel discovered that safety-class seismic bracing had been improperly removed from a glove box. The bracing is credited to prevent glove box toppling and release of Pu-238-doped material in a seismic event. Given this discovery, LANL declared a TSR-violation based on a significant breakdown of the configuration management program.

The credited bracing was removed for a glove box modification project that began over a year ago under a design change package (DCP), but was never completed. When the project was abandoned, the bracing was not reinstalled and the DCP remained open. The glove box was being used to stage weapons-grade Pu when the discrepant condition was found. An annual in-service inspection (ISI) of the glove box and its bracing was performed in May 2008; however, a scientist who did not use a required system drawing when performing the ISI, inappropriately noted the bracing as satisfactory.

In response to this event, the facility operations director (FOD) suspended Pu-238 and Pu-238-doped material operations until appropriate portions of the ISI could be re-performed to verify credited bracing was intact and operable on other glove boxes. Personnel performing ISIs must now be approved by the FOD. An action plan to remove the weapons-grade Pu from the affected glove box is in development. Finally, facility personnel are working on a process to screen and triage the hundreds of legacy DCPs that remain open to identify and address other latent vulnerabilities.

Site-wide Seismic Hazards: LANL recently submitted for NNSA concurrence a revised Project Execution Plan (PEP) for the SAFER project designed to evaluate the impacts of increased site-specific seismic hazards on operating facilities. In the new PEP, LANL commits to evaluate all structures, systems, and components (SSC) credited to perform seismic safety functions in nuclear facilities before the existing site-wide justification for continued operations expires in June 2009. However, the detailed list of SSCs to be evaluated under SAFER does not clearly capture all SSCs credited to perform seismic safety functions (e.g. WCRR drum lift fixture). NNSA review is ongoing.

In terms of progress, modeling activities are underway for the Plutonium Facility and an important kickoff meeting was held this week to discuss the proposed evaluation methodology and acceptance criteria with the expert panel that will provide peer review for SAFER analyses and conclusions.

Transuranic Waste Operations: Last week, the NNSA site office formally disapproved the Area G BIO and TSR package submitted in February 2008. Issues with the control selection strategy and control definitions contributed to the NNSA review team judgment that the proposed TSR set was not adequate or effective.

A key facet of the ongoing Deliberate Operations Project Execution Plan to improve the safety of Area G operations is accelerated implementation of new or enhanced controls from a modern and complaint safety basis. LANL and NNSA personnel met subsequent to the disapproval decision to discuss which controls were still suitable for continuing accelerated implementation efforts.