

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 2008

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending September 12, 2008

Plaue, Shackelford, and Roscetti were onsite this week to review safety system design, functionality and maintenance. Plaue also reviewed nuclear materials management topics.

Transuranic Waste Operations: Subsequent to the TSR violation declared last week related to the Area G lightning protection system (LPS), management suspended all operations not directly involved with establishing the required arc flash exclusion area around LPS components. This week, LANL submitted and NNSA approved a formal recovery plan that defines the conditions and compensatory measures needed to allow the resumption of unrestricted transuranic waste operations in Area G. Prior to the suspension of operations last Friday, LANL had identified a situation that constituted a positive unreviewed safety question but had continued performing some limited operations without any formal approval by NNSA. The recovery plan provided a mechanism to gain this formal approval. The recovery plan also identifies longer-term actions to revise the current safety basis to permanently address LPS issues by December 1, 2008. Authorization to operate under the recovery plan expires on December 31, 2008 (site rep weeklies 9/5/08, 5/30/08, 5/9/08).

Site-Wide Seismic Hazards: The site office recently approved a revised Project Execution Plan (PEP) for the SAFER project, which will evaluate the impacts of increased site-specific seismic hazards. The approval letter requested LANL to revise the PEP to include evaluation of the Weapons Engineering Tritium Facility and ensure that all structures, systems and components (SSCs) credited to perform a seismic safety function are included. The site office's approval of the site-wide Justification for Continued Operations (JCO) that addresses the increased seismic hazard for LANL facilities requires LANL to complete the SAFER project for nuclear and high-hazard non-nuclear facilities by June 2009. The site office also requested quarterly updates on the SAFER project.

Last week, the SAFER project team presented the initial results of their evaluation of the Plutonium Facility to the peer review team. These results indicate that the vertical acceleration of the facility floor may be much larger than expected and would have a significant impact on SSCs that perform a seismic safety function. Based on these results, LANL plans to pursue a probabilistic analysis for the Plutonium Facility and revisit conservatisms in the Probabilistic Seismic Hazard Analysis.

As noted on July 4th, LANL also recently declared an unreviewed safety question and prepared a JCO based on a seismic vulnerability identified for the Chemical and Metallurgy Research (CMR) Facility main vault. While the site office concurs with the compensatory measure (including the vault material-at-risk against the overall facility safety basis limits), the JCO was not approved because a limited duration was not identified for the JCO (site rep weekly 6/27/08).

Integrated Nuclear Planning: This week, LANL, the NNSA site office and NNSA Headquarters held a workshop to discuss plutonium infrastructure and waste management at LANL including capabilities, vulnerabilities, programs and projects. The workshop highlighted the significant challenges at LANL to adequately support safe operations at existing aging facilities while also achieving progress on several projects to replace or upgrade these facilities (e.g., CMR Replacement, Radioactive Liquid Waste Treatment Facility Replacement and new Transuranic Waste Facility).