



Preliminary study assesses potential impact of seismic event at Los Alamos

April 15, 2011



As part of its commitment to maintaining the highest possible safety standards at all of its facilities, Los Alamos National Laboratory (LANL) adopted an updated site-wide seismic hazard analysis standard in 2007. In response to that effort, LANL's Seismic Analysis of Facilities and Evaluation of Risk (SAFER) Project has been conducting a detailed multiyear analysis of the seismic design loads on every existing facility at the site. New or proposed facilities are designed to meet the latest seismic response criteria. Today, LANL announced that it has self-reported to the National Nuclear Security Administration a new preliminary analysis of structural load capacities at Plutonium Facility – 4 (PF-4), located at Los Alamos National Laboratory's Technical Area 55. That analysis, which incorporated new geological data and sophisticated computer modeling, showed that a large earthquake that might occur in north-central New Mexico every 2,500 years could cause significant damage to some parts of the facility. That analysis also identified areas of the facility that if strengthened could increase its seismic response capability and would reduce the potential impact on the

facility even under worst-case seismic conditions. “Everyone at Los Alamos is committed to the safety of our workforce, our facilities, and the community we call home,” said Bob McQuinn, associate director for nuclear and high hazard operations. “While the latest calculations revealed some new areas to improve, we will quickly incorporate those into our ongoing facility improvement activities. As we develop our plan to strengthen the structure, we will tackle those physical updates that provide the largest contributions to facility safety first.” A comprehensive seismic hazard analysis has been under way for several years to provide a better understanding of the stresses on the PF-4 structure and how it might react during any seismic event. The analysis is driven by a standard 10-year reevaluation of the seismic hazard, which incorporates new geological data. Even before this analysis was complete, as part of a continuous effort to improve the safety of lab facilities and operation, Los Alamos began upgrades to the fire suppression system, air handling and filtration systems, and storage infrastructure.

With the addition of the latest information and analysis, NNSA and LANL will seek to make the facility even safer in the unlikely event that an event of this magnitude would occur. TA-55 is located approximately one mile from the Laboratory’s main technical area and administrative hub and covers about four acres. The TA-55 complex began operations in 1978 and is comprised of several buildings, including the 150,000-square-foot PF-4 plutonium processing facility. PF-4 supports plutonium manufacturing, stockpile surveillance, plutonium disposition, plutonium heat source fabrication for deep-space NASA missions, and a variety of nuclear materials research and development programs. LANL is committed to continuous improvement. Reevaluation of site hazards is part of our continuous cycle of risk reduction.

Los Alamos National Laboratory

www.lanl.gov

(505) 667-7000

Los Alamos, NM

Operated by Los Alamos National Security, LLC for the Department of Energy's NNSA

