

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 17, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending April 17, 2009

Plutonium Facility: This week, the Plutonium Facility returned to Operations mode after LANL personnel completed a re-evaluation of all unreviewed safety question (USQ) screens and determinations performed for the facility since January. This re-evaluation was prompted by NNSA site office concerns that facility management had prematurely declared that the recently approved documented safety analysis (DSA) was 'implemented' and began performing USQ evaluations against this document rather than the collection of several dozen documents that served as the facility's previous safety basis. In response, each USQ evaluation that had been performed against the new DSA was re-evaluated against the set of previous safety basis documents. The re-evaluations did not change the outcome of any USQs. Facility personnel will begin performing USQ evaluations against both sets of safety basis documents until the TSRs associated with the new DSA are verified to be fully implemented (site rep weekly 4/3/09).

Sitewide Seismic Hazards: This week, the NNSA site office approved a revision to the sitewide Justification for Continued Operations (JCO) that authorizes nuclear and high hazard operations to continue while the impacts of new information contained in the 2007 updated Probabilistic Seismic Hazards Analysis (PSHA) are evaluated. The 2007 PSHA concluded that seismic hazards at LANL are higher than previously believed. The NNSA-approved revision to the JCO deletes the requirement for additional quantitative analysis and the need for JCO coverage for 18 of the original 24 in-scope nuclear and high hazard facilities. Facility-specific rationale for exclusion was provided for each of the 18 de-scoped facilities. The approved revision also extends JCO coverage for the Plutonium Facility for one year (until June 30, 2010) to provide additional time to perform quantitative analysis of the new seismic spectra on Plutonium Facility structures, systems, and components that are credited with post-seismic safety functions. The JCO expires for the balance of facilities (WETF, RLWTF, WCRR, RANT, and CMR) on June 30, 2009, meaning that facility-specific evaluations performed under the SAFER project must be complete by that date (site rep weeklies 1/9/09, 9/12/08, 6/27/08).

Weapons Engineering Tritium Facility (WETF): WETF personnel have completed reviews of facility safety systems affected by the widespread Pressure Safety Program issues that have kept the facility in Warm Standby mode since last October. Corrective actions associated with deficiencies identified by these reviews have been categorized as either prerequisites or follow-on activities for resuming hot operations and have been vetted by LANL's institutional pressure safety committee. Prerequisites include physical system modifications to install pressure relief devices, improved administrative control of valves and system lineups, and additional personnel training.

The current safety basis requires that the maximum allowable working pressure (MAWP) of systems be known and protected. Given the incomplete technical baseline for some credited systems, the MAWP for a number of components and sub-systems cannot be readily determined. Facility management is expected to pursue a safety basis change to allow resumption of hot operations with compensatory measures to protect credited system components with indeterminate MAWPs. Timely resumption of hot operations is being sought to allow the processing of legacy tritium-bearing components known to exceed their MAWP in order to eliminate the hazard these items present.