

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 29, 2010

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending January 29, 2010

Nuclear Criticality Safety: In a letter dated January 21, 2010, the Livermore Site Office (LSO) approved a laboratory request to cease resource expenditures in support of deploying the Criticality Special Support System (CSSS) as a safety significant system. The lack of a credited safety function, transition to the new LANMASS material control and accountability system, and the declining inventory of fissile materials were cited as the bases for the approval. In particular, LSO and the laboratory cited that documented evaluations demonstrate that a single credible failure of the mass parameter could not result in a criticality accident. CSSS had been planned to supplement the existing material control and accountability system with a program that met software quality assurance expectations.

Plutonium Facility: In recent weeks, facility management identified several instances of technical safety requirement surveillance procedures that did not meet expectations. For example, surveillance procedures for similar components in different increments of the facility displayed slight variations in language and content. While no instances were found to have incorrect steps, the language placed an unnecessary burden on facility operations staff to interpret the step. It appears these minor deviations accumulated as revisions were made during the past several years. As a result, management has tasked an outside contractor to review procedures, with a focus on those that have experienced multiple revisions, to ensure consistency and remove unnecessary ambiguity.

Training: In an April 2009 assessment, LSO identified several weaknesses associated with the nuclear facility personnel training and qualification program. In order to drive improvement in this area, LSO included an objective to develop and execute a nuclear facilities training improvement plan as part of the fiscal year 2010 Performance Evaluation Plan. The first deliverable in the plan, which was approved in November 2009, was an update to the Training Implementation Matrix (TIM) for the Tritium Facility. The updated TIM was submitted according to schedule and was approved by LSO on January 21, 2010. TIM updates for the other remaining Superblock nuclear facilities are expected by April 2010 (note that the Plutonium Facility TIM update was completed in July 2009, but another revision is expected this Spring). Other deliverables in the improvement plan include: (1) revise the institutional training document and develop an associated implementation plan, (2) develop software that ensures incorporation of the systematic approach to training in course content and implement it for selected key training courses, (3) conduct an assessment of nuclear facility training using Department of Energy Standard 1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs*, and (4) develop and implement a revised conduct of operations training course for nuclear facility personnel.