

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2007

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: J. Plaue, Acting DNFSB Site Representative
SUBJECT: Lawrence Livermore National Laboratory
Report for Week Ending June 29, 2007

Activity Summary: Michael Merritt was on leave this week. Jonathan Plaue was onsite performing site representative duties and participating with staff members B. Broderick and A. Matteucci in a review of pit manufacturing technology, contract transition plans, and nuclear facilities operations. In addition, staff member A. Gwal was at LLNL this week participating in a meeting of the Nuclear Weapons Complex Lightning Committee.

Plutonium Facility Documented Safety Analysis Implementation Plan: This week, LLNL expects to issue notification of the implementation of the third set of controls in accordance with the safety basis implementation plan (see weekly report dated December 8, 2006). The third group of controls includes three safety-related structures, systems, and components (SSCs)—fire suppression, fire detection and alarm, and room ventilation—and four administrative safety management programs—fire protection, radioactive and hazardous material shipping, record keeping, and industrial safety and hygiene. Implementation ensures that SSCs are configured to perform the required function. A subsequent effort under the configuration management initiative will standardize and upgrade drawings that will contain more detail (i.e., subsystem functional classification) than existing drawings. Preliminary copies of the new drawings for the fire suppression system, which were developed using the newly created drafting standard, were examined and found to be markedly improved above the existing redlined versions. Implementation of the room continuous air monitors—a holdover from the second group—is also expected following approval by the Livermore Site Office (LSO) of page changes to the safety basis. These page changes provide clarification for the conditions necessary to enter the action statements defined in the technical safety requirements. Progress continues to be made toward completion of the next two groups of controls and efforts are underway to accelerate completion of the overall plan in support of contract transition.

Tritium Facility Operations: Construction continues on the Tritium Facility Modernization (TFM) project. Facility management estimates the conventional construction and special equipment installation completion status is at approximately 40 % and 15 %, respectively. Installation of the new Tritium Science Station is also nearing completion. This station replaces existing tritium handling capabilities that will be removed to support TFM construction. A critique (the third performed in LLNL history) was conducted this week regarding the inadvertent removal of electrical conduit during TFM construction activities.

Pit Manufacturing Technology: Design activities to support installation of new foundry technologies in the Plutonium Facility are nearing completion. The new equipment will demonstrate technologies intended to produce less waste, lower radiation exposures, and increase overall manufacturing efficiencies. A facility engineering design review is planned for early next fiscal year at which time regular interaction of LSO staff with the project is expected to commence. Planned operations with radioactive materials are scheduled to start in 2010.