

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 18, 2011

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending November 18, 2011

DNFSB Staff Activity: On Tuesday, the staff held a teleconference with personnel from the Livermore Site Office (LSO) and laboratory contractor. The staff discussed the basis for the approval of the change to the condition of approval concerning controls for hydrogen deflagrations (see weekly report dated October 14, 2011).

Plutonium Facility: Program personnel completed without incident the disassembly of the nuclear explosive-like assembly (see weekly report dated April 8, 2011). The disassembly was accomplished using a work permit supplemented with a procedure-like document specifically developed for the activity.

On Thursday, program personnel presented a work permit to support entering phase II of trial period operations for the HYDOX operation. HYDOX converts plutonium metal to oxide via hydride and nitride process intermediates. HYDOX operations are performed in the same glovebox and under the same Operational Safety Plan that supports the ongoing HYDEC (hydride/dehydride/casting) operation. Differences in the operations include the use of the hydride reactor for nitriding and startup of a new pulsed bed reactor for conversion of the nitride to plutonium oxide. Program personnel intend to develop operating procedures for each of these processes, as well as a startup plan for equipment testing. Following additional review, the Readiness Review Board reaffirmed that a readiness assessment is not required for HYDOX.

Trial period operations will be accomplished using Appendix C Workstation Operation Start/Restart Process of the *Work Planning and Control Manual*. This process provides general checklists to ensure that personnel are trained, equipment is functional, and conduct of operations elements reviewed; however, there is no independence associated with this process.

Startup and Restart: Based on recent experiences during Readiness Review Board discussions, LSO personnel intend to walk-down proposed new activities and drive more detailed comparisons between existing operations and proposed activities. Contractor personnel also plan to conduct a process improvement on the readiness screening process to ensure appropriate and effective criteria are used for readiness determinations.

Integrated Safety Management (ISM): On November 8, 2011, the Office of Health, Safety and Security (HSS) issued their report on ISM effectiveness at LSO. Overall, HSS found that LSO has a mature ISM program and that their process for overseeing contractor activities is improving. The report also notes that LSO has been responsive to the Board's letter dated June 14, 2010; however, some managers with oversight responsibilities have not been trained in the oversight of work planning and control. Recommendations of note include: (1) complete pre-existing corrective actions to resolve weakness in the lessons-learned and operating experience program, (2) conduct a self-assessment of the nuclear maintenance program, (3) provide continuing training in the area of work planning and control oversight, and (4) consider extending the breadth of participation in work planning and control oversight beyond Facility Representatives to include subject matter experts.