DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 27, 2010

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending August 27, 2010

Livermore Site Office (LSO): The LSO Manager recently announced the selection of the second Technical Deputy Manager. The LSO Manager also announced her intent to evaluate the office structure. A revised management structure is expected by the end of this fiscal year.

Work Planning and Control: This week, members of the Energy Facility Contractors Group were at the Laboratory to perform an assist visit focused on activity level work planning and control. The scope of the review included both the institutional work planning processes and the processes utilized in the Nuclear Materials Technology Program (NMTP) nuclear facilities. The group identified several positive attributes as well as opportunities for improvement. Of note, the group took an action to develop criteria for work instructions applicable to research and development applications. The Laboratory's Work Control Review Board is expected to consolidate the improvement areas with their own observations and develop corrective actions.

Startup and Restart: Late this week, LSO approved the Laboratory's startup notification report (SNR) for the fourth quarter of the fiscal year. As a condition of approval, LSO directed the Laboratory to perform a limited scope readiness assessment on the Tritium Process Station (TPS). The TPS was part of the Tritium Facility Modernization project, which received Critical Decision 4 on September 30, 2009 (see weekly report dated October 2, 2009). Since that time, the TPS has not operated with tritium and several modifications have been made to enhance the capability and design of the programmatic equipment. The readiness assessment is to examine these changes and is targeted for mid-September. The SNR also identified a slip in the readiness assessment for the chlorination system to September (previously listed as July). This activity continues to slip and is unlikely to occur as currently estimated.

Plutonium Facility: On August 10, 2010, the NMTP Leader announced a change in facility management. The Facility Manager (FM) was dispatched to support a high priority effort at the Nevada Test Site. While the position is posted, the Deputy FM will be acting as FM and the NMTP Facilities Engineering Manager will be acting as Deputy FM. This week, the acting Deputy FM completed interim changes by naming an acting Facilities Engineering Manager.

This week, the Laboratory identified the source of the cooling water leak in the casting furnace (see weekly report dated August 20, 2010). The leak was located near the top of the water-cooled induction coil. The induction coil surrounds the feed crucible directly above the casting mold/die—all of which is located in a sealed well in the glovebox floor. The safety basis considers an over pressurization event resulting from liquids coming into contact with a furnace in a glovebox. The event was categorized as unlikely and results in low unmitigated consequences to the worker (the event also serves as an initiator for other events). As a result, no features or controls were identified as safety related; however, the analysis credited a number of features and programs (e.g., glovebox exhaust and training), including a design feature to minimize the potential for liquids to contact molten materials during a leak (EQPD6). LSO is currently reviewing the implementation and documentation associated with EQPD6.