

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 24, 2009

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending July 24, 2009

Emergency Preparedness: The annual nuclear criticality exercise was conducted at the Plutonium Facility this week. The exercise was intended to meet the requirement of American National Standards Institute/American Nuclear Society 8.23, *Nuclear Criticality Accident Planning and Response*. The laboratory also utilizes this exercise as part of its overall program to meet Department of Energy Order 151.1C, *Comprehensive Emergency Management System*. This year's scenario involved a pyrophoric event during opening of a drum containing packages of nuclear material. The event resulted in burns to the fissile material handler and started a fire. Subsequent collection of sprinkler water in the drum resulted in a nuclear criticality coincident with the fire department response. The exercise critique process, and the associated development of any identified corrective actions, is underway.

The contract for fire and emergency services provides for planning, training, and operational familiarization in support of responses to the nuclear facilities. The contract also requires participation in the laboratory's drill and exercise program; however, each year the criticality exercise has typically been the only exercise or drill planned by the laboratory that involves full fire department response into a nuclear facility. The nature and primary objective of the criticality exercise somewhat limits the opportunity for assessing the fire department response and interface with Plutonium Facility management. For the other nuclear facilities, the element of the laboratory's readiness assurance involving the fire department is difficult to determine without regular, full participation drills and exercises. Based on similar observations from recent external audits and self-assessments, the laboratory is working to improve the drill and exercise program. The laboratory and the Livermore Site Office are currently developing the exercise and drill program for next fiscal year.

Hardened Engineering Test Facility: The first hazard category 2 operation was successfully conducted this week. The specific activity, which involved the use of plutonium, was conducted under a senior supervisory watch as directed in the startup plan. This was the laboratory's second application of a senior supervisory watch. Institutionalization of this process for use at all of the nuclear facilities would be beneficial.

Livermore Site Office: Two individuals from the Service Center were here this week to assist in a self-assessment of oversight practices and processes used at the Radioactive and Hazardous Waste Management facilities. Results are expected next week.