

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 29, 2004

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: Michael J. Merritt, DNFSB Site Representative
SUBJECT: Lawrence Livermore National Laboratory
Report for Week Ending October 29, 2004

Independent Oversight Inspection: The Department of Energy Office of Independent Oversight and Performance Assurance (OA) conducted an inspection of environment, safety, and health (ES&H) management at LLNL October 18-28, 2004. This on-site inspection was preceded by a planning visit and will be followed by a validation and closeout visit in November. The focus of the inspection was safety management with specific evaluation of the following:

- performance during operations and work activities;
- essential safety system functionality;
- effectiveness of feedback and improvement systems; and
- specific focus areas including the unreviewed safety question process and management of legacy hazards.

As part of reviewing facility-specific implementation, the team developed inspection criteria to evaluate the implementation of integrated safety management (ISM) and assigned teams to review ISM in various directorates including the Defense and Nuclear Technologies (DNT) Directorate that manages the Plutonium Facility.

A plan describing the inspection was provided to the Livermore Site Office (LSO) and LLNL in mid-September. The plan provided the details of the inspection process and scope. The goal of the inspection was to provide an independent evaluation of the effectiveness of safety management at LLNL including an assessment of LSO and LLNL management. Each area reviewed was evaluated based on specific inspection criteria and inspection lines of inquiry. As an example, when evaluating essential safety systems, one criteria was to determine if “technical, functional, and performance requirements for the system were specified in the facility authorization basis documents.” A related line of inquiry determined if the authorization basis documents identified and described the safety functions.

The formal results of the inspection will not be published until December, but based on observations by team members and daily briefings by the inspection team leader, the report will likely identify weakness in the implementation of ISM at DNT facilities. Based on preliminary indications, the report will probably identify weaknesses in the following areas:

- identification of hazards and hazard controls;
- design analysis of certain safety systems;
- procedural development and compliance; and
- radiological controls program implementation.

Some of the initial observations also indicate a problem with the configuration management of vital safety systems and quality assurance. As previously reported (see weekly report dated October 8, 2004) the LLNL program to ensure performance and reliability of safety systems needs to be strengthened.