

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 30, 2004

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending April 30, 2004

**Integrated Safety Management (ISM):** Several people in the Chemistry and Metallurgy Research building (CMR) were exposed this week to irritating vapors and received medical attention. The source was a battery charger in a space with potentially inadequate ventilation. LANL emergency personnel responded. There are questions on whether hazards were adequately identified and whether appropriate controls were place (e.g., formal equipment tag-out, personal protective equipment, monitoring equipment, flammable gas control). LANL is investigating.

**Plutonium Facility (TA-55):** TA-55 went into standby mode and suspended operations intermittently this week in order to troubleshoot the Uninterruptible Power Supply (UPS). The UPS failed last Friday during restoration from maintenance, raising reliability concerns, but the failure has not been repeatable. The system has since operated normally. UPS is safety-significant. When off-site power is lost, it provides power to select safety systems, including criticality alarms, the paging/general announcement system, and the facility control system. Compensatory measures are in place. While in standby, NNSA approved one special-case fissile material move to support a programmatic need.

**Radiography Facility (TA-8-23):** TA-8-23 resumed limited operations this week after implementing a standing order that requires posting an individual who can alert others in the event of a fire alarm.

**Engineered Controls:** NNSA and LANL need to apply more attention to ensuring that the engineered controls selected have clearly defined safety functions, that they will fulfill those functions, and that they constitute a complete set (site rep weekly 3/12/04, 12/26/03). Last Friday, LASO and LANL sent to NNSA headquarters a requested extension for a report to the Board on LANL plans to implement conduct of engineering and the DOE Facility Safety Order 420.1A (ref: Board letter 1/27/04, which includes a 90-day reporting requirement). While LANL has several solid initiatives underway for facility work, progress for programmatic work has lagged. LANL intends to move toward a single site-wide engineering program, covering both facility and non-facility work. Considering the magnitude of the task, LANL expects to have a plan by June 30<sup>th</sup>.

**Administrative Controls:** Board Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*, observed that there are administrative controls having a safety function that should be implemented with the same degree of rigor and quality assurance as that afforded engineered controls with similar safety importance. In March, LASO provided NNSA headquarters a list of LANL administrative controls to be verified in response to this recommendation. The list is a "shot-in-time" as some safety bases are being updated and some additional guidance and standards are being prepared.

The current list does not appear to meet the intent of DOE's implementation plan and the Board's recommendation and needs to be re-evaluated. It is not clear that all the nuclear facilities understood that the controls to be reviewed included not only administrative control programs but also limiting conditions for operations (LCOs) and surveillance requirements. It is also not clear that they understood that the controls to be identified are limited to those performing a function that ideally would be performed by a designated engineered safety system if such a system was installed.