

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 16, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending July 16, 2004

Matthews, Jordan, and Burns were here this week reviewing operations.

Management: On Friday, the LANL Director suspended all but essential operations as a result of recent significant safety and security events. By memo, he directed all LANL organizations to perform a point-to-point risk assessment of day-to-day activities. The duration of the suspension will depend on the formalities, complexities, and risks identified in each part of the lab's operations. LANL expects a staggered restart with some low-risk operations resuming quickly. The NNSA Site Office is working with LANL senior management to assess the risk group-by-group of resuming operations.

Integrated Safety Management (ISM): On Wednesday, a student received an eye injury while working under supervision with a laser in a non-nuclear facility. The event is under investigation and has implications for work control both in nuclear and non-nuclear facilities (site rep weekly 5/7/04). LANL has begun to take institutional actions in response to this event.

Training: LANL senior management is engaged in addressing the institutional training issues discussed last week and expects to have an integrated, resource-loaded corrective action plan by the end of August, as requested by the NNSA Site Office. LANL resources committed to training dropped by half between 1994 and 2002 and have since remained steady; training had become largely decentralized, expert-based, and poorly documented. Management attention is now increasing. While it will take time to fix, improving training may provide an opportunity to increase management and worker awareness and compliance with policies and procedures involving safety and security.

Critical Experiments Facility (TA-18): Last Friday, TA-18 curtailed all operations involving nuclear material on critical assemblies. They also curtailed nearly all operations involving accountable quantities of nuclear material, including movements. Operations involving Technical Safety Requirement (TSR) surveillance, the early material move, and sub-accountable quantities (e.g., check-sources) were allowed to continue under increased management attention (e.g., direct division-level management supervision of early move activities).

LANL management directed the curtailment after TA-18 discovered a TSR violation. Specifically, a material custodian failed to verify the material-at-risk (MAR) inventory in a shed before introducing a powder-form item. Furthermore, the safety basis prohibits powder-form MAR being stored in the shed; TA-18 did not comply with all the actions required in an LCO for when MAR is exceeded. LANL review of the event identified weaknesses in operator training and qualification related to compliance with admin controls and in operations management when key personnel are absent.

The admin controls violated here have no apparent direct role in preventing the reactivity excursion accident discussed in the Board's May 21st letter; however, the weaknesses found reinforce the concerns raised by the Board – the high reliance on admin controls, on operator training and qualification, and on operations management in preventing an accident with significant off-site consequences. The site rep understands that LANL will address the Board's issues in the resumption plan being prepared.