

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 9, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending March 9, 2007

Federal Oversight: The acting NNSA Los Alamos Site Office (LASO) Manager presented his plan this week for adjusting the site office organization. The plan focuses on defining and staffing the long term site office management structure, ensuring facility representative coverage for nuclear facilities and placing additional emphasis on expeditious completion of training and qualification efforts for site office personnel. This plan also dissolves the 3 existing integrated operating teams (IOTs) with all currently deployed personnel returned to their parent organizations within the site office to focus on training and qualification. Two new IOTs (one for defense programs facilities; one for environmental management facilities) will be created and staffed as qualified personnel become available.

Contaminated Injury Investigation: Last week, the investigation team separately briefed LANL and NNSA management on the two contaminated wound incidents that occurred in January (site rep weeklies 2/2/07, 1/19/07, 1/12/07).

On Jan 8th, a CMR Wing 2 glove-box worker pierced a finger with a screwdriver while attempting to pry free a plutonium specimen from an epoxy mount. He was working alone. He withdrew his arms from the glove-box gloves, went into the next room to phone for assistance, and reached someone on his fourth attempt, who notified the CMR operations center. Radiological assistance arrived, and the worker was escorted to medical within an hour. LANL medical first excised the wound and then began chelation after 5 hours. Intermittent treatment continued for several weeks and reduced but did not eliminate the embedded activity. LANL expects a preliminary dose estimate in about 4 months.

On Jan 17th, a TA-55 machinist scratched his wrist on a lathe bit while donning a cotton glove over a glove-box glove. Per their training, personnel evacuated the room, and a radiological control technician assisted the machinist in donning a respirator before he withdrew his arms from the glove-box. The machinist was deconned and taken to LANL medical within two hours. The wound count slightly exceeded the guidance level for chelation, which began after 5 hours. Treatment continued for 2 days. Since the activity was close to the skin's surface, it was readily excised and eliminated.

Management responded as follows: Jan 11th – the responsible CMR group leader directed a review of operations involving sharp objects; Jan 17th – the responsible TA-55 division leader paused operations pending a review of sharp objects; Jan 19th – the responsible TA-55 associate director formally directed actions to enhance glove-box safety; Jan 20th – the responsible CMR associate director paused CMR glove-box operations; Jan 22nd – the LANL Director appointed a joint investigation team.

LANL's investigation identified several causes, which are similar to those of past events: • personnel did not follow procedures; • management expectations and supervision were inadequate; • management ineffectively responded to precursors; • some LANL managers lack the experience and training required to ensure that daily work is performed safely, while others with such experience are ineffectively used; • the CMR work was expert-based vice procedure-based; • the TA-55 work involved a hazard (the cutting bit) that management didn't eliminate or remove. The team also observed a lack of formality and consistency in the medical response. Schedule pressure and a perception of "mission over safety" had apparent roles. LANL is developing corrective actions.