

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 7, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending March 7, 2003

Facility Operations: LANL has established a Nuclear Safety Executive Board to elevate the details and closure of emergent nuclear safety issues to senior management attention.

Nuclear Materials Management: NNSA and LANL have made progress in nuclear material management. However, a significant inventory of excess material is here or is planned to be shipped here soon that lacks a clear disposition path (Board ltr 5/20/02, site rep weekly 3/8/02).

There are successes. TA-18 has shipped about 0.5 MT of uranium-based materials to Oak Ridge and continues shipments. This includes old CMR material and Omega West Reactor fuel (site rep weekly 8/9/02). CMR has also resumed processing TA-18 excess uranium solutions (SHEBA fuel) and has processed about one-quarter of those solutions. This activity will likely be interrupted to relocate equipment within CMR (site rep weekly 11/22/02). LANL also plans to characterize 34 questionable drums of excess uranium this year and disposition them during the next two years.

There are also problems. LANL excess nuclear materials without a current disposition path include: about 0.5 MT of fuel-grade plutonium (Pu) and Pu contaminated highly enriched uranium (HEU); some non-MOX specification plutonium; about 5,000 transuranic sealed neutron sources; and a small inventory of U-233. The U-233 has been waiting awhile for Oak Ridge containers. The sealed sources are among those being actively recovered from around the US by the Off-Site Source Recovery Project (OSRP). Most of the 5,000 sources already here have been consolidated into about 300 waste drums; however, they currently have no pathway out of LANL, primarily because of programmatic issues involving eligibility for WIPP. The other materials also have no clear pathway, primarily because of programmatic issues affecting multiple DOE sites. These issues involve resource allocation, consistent material definitions and requirements, and coordination between sites (both NNSA and DOE-EM) that have similar excess materials.

Plutonium Facility (TA-55): TA-55 continues to thoroughly investigate the numerous high fixed head airborne samples reported in site rep weekly 2/21/03.

On Saturday 2/22/03, two pipe fitters received a possible inhalation dose, based on positive nasal smears (37 dpm alpha max), and had skin contamination (500 dpm alpha max). This resulted when they opened a leaking steam condensate line for repair with insufficient radiological controls. The workers were in one-pair of anti-c's but without respirators. The work authorization did not require respirators, a Radiological Work Permit (RWP), or assign radcon coverage. During work planning, the assumption was made that no contamination was present – based on no detectable activity in leaked water and no contamination found when the system was last opened, which was more than a year ago. This system is in the PF-4 basement near the ceiling and connected to a lab room. NNSA and LANL recognize it should have been treated as potentially contaminated.

The facility's immediate and supplemental actions appear appropriate. Involved personnel were decontaminated and placed in a diagnostic bioassay program. Facility management has reviewed this event with appropriate personnel and has directed that no intrusive work without an RWP may be performed unless it is specifically approved by facility management. TA-55 is still considering what permanent improvements need to be implemented in this area.