

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 15, 2002

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending March 15, 2002

**LANL Authorization Bases (ABs):** This week, LANL proposed to DOE a new TA-18 authorization basis, which applies to the Critical Experiments Facility. The improved AB ought to address some operational issues seen in the last year. This is the second major AB submittal under the new master schedule. DOE action is forthcoming on the WETF submittal (site rep weeklies 1/25/02, 2/15/02).

**Tritium Operations:** Last Monday (3/4/02), tritium contamination up to 200,000 dpm/100 cm<sup>2</sup> was detected in uncontrolled spaces in the Tritium Systems Test Assembly Facility (TSTA), including the shoes of four personnel. TSTA is a Hazard Category 2 (HC-2) facility in TA-21. There were no continuous air monitor (CAM) alarms during the event. The contamination was traced to an area where process piping had earlier been removed from a glovebox inside a radiological buffer area. Local tritium contamination levels were up to 12 million dpm/100 cm<sup>2</sup>.

It is not clear yet why this loss of contamination control occurred. LANL is in the process of removing contaminated equipment from TSTA in an effort to reduce source-term, downgrade TSTA to a radiological facility in 2003, and eventually inactivate the facility. The site rep understands that equipment has been removed from several gloveboxes recently without a problem, and that facility operations personnel are investigating why this event happened.

**Plutonium Handling Facility (TA-55):** On Wednesday, an alpha contamination event occurred in TA-55 that led to CAM alarms, two personnel with positive nasal smears, and one with skin contamination. Bioassay results are forthcoming. The event occurred when an employee removed copper vacuum tubing from a plastic waste bag and began cutting out lead-solder fittings so that the tubing would not need to be disposed of as mixed waste. The tubing was contaminated and had been previously removed from a glovebox being decommissioned.

LANL is still investigating this event and is already taking appropriate action to prevent recurrence. At this point, division management believes that personnel may not have been performing work per the applicable hazard control plan and radiological work permit and that there may have been shortcomings in training and supervision. As a result, management has stood down the team involved with the job, pending approval of a corrective action plan; directed a group all-hands meeting to discuss the event and lessons learned; and taken action to improve direct supervision and daily communication and feedback from workers on job hazards and work authorization. The site rep understands that, longer term, the facility will look at the effectiveness of worker training. LANL plans dramatic increases in staffing in this area during the next year.

**Dynamic Experimentation:** This week, the site rep toured a TA-16 assembly building that used to be a HC-2 facility (2000), was derated, and is expected to be declared a "temporary nuclear facility" intermittently, beginning several years from now. The facility is structurally robust. Equipment appears well-grounded. Housekeeping and combustible control look good, but fire protection (e.g., sprinkler head type) and seismic support of overhead appurtenances may warrant examination. It would be worthwhile to resolve these issues and put in place appropriate configuration management and maintenance well in advance of any future readiness assessment for nuclear operations.