

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 22, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending March 22, 2002

Tritium Operations: LANL is considering improvements in contamination control and monitoring in tritium facilities as a result of the uncontrolled contamination in the Tritium Systems Test Assembly Facility reported last week. LANL has indicated that thorough contamination controls are warranted for tritium system maintenance and modifications because tritium surface contamination is difficult to quickly detect. Per the facility, smear surveys were done following the job in question, and these did not detect the elevated levels. Instead, they were discovered later during a daily smear survey. The contamination had spread sufficiently that it took about a week to clean up. Possible improvements mentioned include increasing use of booties; placing a removable surface around any glovebox that has been opened; and investigating use of more-sensitive, real-time surface contamination monitors.

Plutonium Handling Facility (TA-55): Contamination control in TA-55 may warrant increased attention, particularly in the process chemistry area. Last Friday, an elevated weekly fixed head airborne sample was reported for one room in this area. The site rep understands that this has been traced to a single particle on the sample, possibly dispersed by nearby maintenance in a normally inaccessible raceway. On Saturday, workers in another room were conducting a radiological survey and discovered a brown spot where a line attaches to the top of a glovebox. Workers measured 0.5 million dpm alpha on a wet cheesecloth that had been swiped over the brown spot, and they left the room. There were bootie contaminations from this event but no continuous airborne alarms. Nasal smears were negative. Workers subsequently covered the dark spot, decontaminated and surveyed the room, and released it for operations. There may be similarities between these events and those reported in site rep weekly 12/14/01. Corrective actions discussed at that time may need reemphasis.

Critical Experiments Facility (TA-18): Last week, LANL issued a Planet Control System Design Document, describing changes being made to address reliability issues (site rep weekly 1/11/02). The key changes appear to be replacing the early 1980s vintage computer, motor controller, and amplifier with modern components similar to those used in SHEBA and Comet; shifting the platen motor power source from building power to the more-restricted, Plan 3 AC power; and making the watchdog feature that detects a computer hang-up a stand-alone function, thereby eliminating a failure mode.

DOE Independent Oversight Review: On Monday, the DOE Office of Independent Oversight and Performance Assurance (DOE-OA) began an on-site safety and emergency management inspection, which will last two weeks (site rep weekly 1/4/02). The inspection team has about two dozen members. The inspection plan emphasizes assessing DOE and LANL management performance, local self-assessment processes, and feedback and improvement mechanisms. The team is observing facility operations, primarily in the Chemistry and Metallurgical Research Building (CMR) and the Radiological Liquid Waste Facility (TA-50). It is also reviewing the functionality of selected essential safety systems (CMR fire protection and ventilation), as well as environmental protection, monitoring, and waste management. Emergency management is also being assessed by a program review and tabletop exercises involving key LANL emergency response personnel. DOE-OA plans to deliver a draft report to the site in mid-April and should have a near-final draft by the end of April.