

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 2, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending August 2, 2002

Decommissioning Activities: DOE has provided comments and LANL management has increased attention on ensuring that the tank characterization activity discussed last week will be safely conducted and that pre-start readiness will be adequately assessed.

Plutonium Facility (TA-55): Last Wednesday night, PF-4 shutdown all ventilation in a controlled manner in order to repair a minor instrument air leak. While ventilation was shutdown, the facility was depending on confinement integrity without differential pressure to prevent a release. This is permitted by the Authorization Basis (AB). Following the repair (about 1 hour), TA-55 restored ventilation, confirmed no release of radioactivity, and returned to normal operation. LANL is planning system upgrades to eliminate this single-point failure mode in the future.

There were options physically available to perform this minor repair without shutting down ventilation. Specifically, either process air or nitrogen could have been valved in through an existing cross-connect and thereby maintained instrument air capacity while the repair was made. These options were not pursued because of a DOE AB requirement to keep process air isolated from instrument air. Nuclear facilities are expected to strictly adhere to these requirements; however, in this case, this may have put the facility into a potentially more vulnerable position. It may have been better if DOE and LANL had evaluated the relative risks of the options available on a timely basis that supported facility operations and then pursued the least risk alternative, revising the AB if necessary and appropriate, possibly even on a temporary basis.

Lightning Monitoring: Last Friday, the Radiography Facility (TA-8-23) discovered that it had operated that day and been unaware of a one-hour lightning warning. The facility's AB requires action during a lightning warning if certain types of operations are being conducted. By chance, none of those operations were underway, and Friday's operation actually was completed in the morning, while the lightning warning occurred in the afternoon. To meet the AB requirement during special operations (and as good practice at other times), TA-8-23 has an informal agreement with another LANL division (DX) to be notified when lightning conditions arise. However, no notification was made last Friday. The facility is now pursuing a formal agreement on notification. There are other possible improvements (e.g., an auto-dial alert system).

Longer-term, LANL intends to delete the notification requirement from the facility's AB. LANL believes that notification provides little additional safety over the "Faraday-cage like" building and the periodic verification of compliance to the applicable standard (NFPA-780). The site rep believes that there may be transient operations (e.g., vehicle loading or unloading) when lightning notification and safely securing operations may be appropriate AB requirements.

Critical Experiments Facility (TA-18): This week, DOE issued the Safety Evaluation Report (SER) for the new TA-18 AB, submitted by LANL in March (site rep weekly 5/10/02).