

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 26, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending April 26, 2002

Plutonium Facility (TA-55): The Fire Protection Yard Main Replacement Project has been progressing relatively smoothly; however, the entire fire suppression system (old and new) was inadvertently pressurized this week while personnel were preparing to hydrotest a newly installed section. The facility is investigating the event.

Chemistry and Metallurgical Research Building (CMR): CMR is investigating a double failure that likely led to a small amount of contamination outside controlled spaces. On Wednesday, one Wing 7 room had a continuous airborne monitor (CAM) alarm, indicating contamination in a controlled space. The room was secured. Early Thursday morning, a programmable logic controller (PLC) failed, resulting in Wing 7 supply and exhaust ventilation shutting down (a safety-related system). Ventilation was restored, but subsequent surveys discovered contamination outside the door to the room that had the CAM alarm. The facility is preparing a recovery plan.

CMR also reported this week that four plutonium oxide sample vials fell to the floor as they were being removed from a hood. The oxide was double-contained, within inner and outer glass vials. The vials were in a plastic container. The plastic container's lid came loose as it was being lifted. The outer glass vials broke for two of the samples, leaving the inner glass vials as the single barrier protecting personnel in the room. CMR is treating this as a near-miss for personnel uptake and is taking appropriate actions.

Weapons Engineering Tritium Facility (WETF): This week, DOE advised LANL that higher temperature-rated seals need to be used on tritium storage containers (i.e., rated at 482 °F). As reported last week, robust containers are one of the more important engineered features in WETF. DOE indicated willingness to consider alternatives if proposed by LANL.

Authorization Basis (AB): Overall, DOE and LANL have a thorough AB preparation, review, and approval process, but there are some weaknesses that could affect safe and efficient operations. Readiness assessments (RAs) are done before starting up new operations or implementing AB changes. Several people involved here with the AB preparation and review process believe that missteps made during the AB preparation phase should be recognized and could be corrected during the RA phase. The site rep believes that RAs are unlikely to provide that assurance. While an RA team may judge whether an approved safety control is adequately implemented, it is unlikely to question the approved basis for that control. Also, when AB deficiencies are recognized at the RA phase, most facilities find the necessary corrective actions highly disruptive. Those actions may require time-consuming engineered backfits, procedure changes, and operator retraining. Such backfit activities rarely result in solutions as acceptable as those that are developed in advance.

In another area, the site rep has observed that the periodic AB update process is not being rigorously managed because of the high priority assigned on achieving full AB upgrades by April 2003. While the priorities are appropriate, lack of rigor in maintaining updates appears to have caused operational problems in the past. Such problems may occur this next year until the full upgrades are in place.