

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 7, 2008

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** B. Broderick and C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending March 7, 2008

Andersen, Bamdad, Kasdorf, Kimball, and Plaue were on site reviewing CMRR. The staff separately discussed notional TA-55 facility improvements, RLWTF influent projections, and nuclear material management and packaging. Broderick was off-site one day for a Pantex lightning protection review.

**Environmental and Waste Operations:** Waste operations, including Area G, resumed this week after thorough review by its strengthened operations management team. Overall, the two-week pause accomplished the objective of jump-starting improvements in disciplined operations. In the process, operational awareness increased, but also the post-resumption scope grew and schedule lengthened.

For example, LANL now anticipates that the new Area G safety basis, submitted last Friday, will be implemented by December instead of June, the prior estimate; consequently, LANL intends to verify the current safety basis is fully implemented this month, reducing the dependence on the new safety basis prior to its federal acceptance. Overall, LANL expects to issue an updated disciplined operations improvement plan next week. Risk reduction depends on timely execution of the plan while continuing operations that reduce transuranic waste inventory (site rep weeklies 2/29/08, 2/8/08).

**Chemistry and Metallurgy Research Building Replacement Project (CMRR):** The radiological lab construction remains on track for late FY09 beneficial occupancy. The nuclear facility preliminary design is in review; final design is expected to start in late 2008 following the records of decision for the site-wide and the programmatic environmental impact statements. Technical challenges include: structural design to accommodate higher vertical accelerations from the new seismic spectrum; glove-box automatic fire suppression; trolley penetrations through fire barriers; and the tunnel interface with PF-4. NNSA and LANL continue to evolve the path-forward on the building confinement strategy.

**Plutonium Facility (TA-55):** TA-55 operational tempo is increasing, as expected, following the outage. The criticality safety augmented limit reviews continue; vault operations are limited, but major manufacturing and aqueous operations are released. Separately, LANL has a notional, phased, path-forward that could substantially improve PF-4's engineered safety systems, including confinement ventilation, within a few years at reasonable cost; this is being considered for the integrated priority list.

**Chemistry and Metallurgy Research Building (CMR):** LANL is preparing a safety basis addendum to support the large vessel cleanout project in Wing 9 of CMR. The current project scope would remove and dispose of actinide materials in 9 legacy vessels currently staged at TA-55 (a commitment under Rec. 94-1/00-1). This would leave 5 additional vessels staged at TA-55 whose bulk materials have been largely removed but require additional remediation before they can be dispositioned. The ability to process these additional vessels in the future at the CMRR facility is unclear since the Large Vessel Handling mission is being considered for removal from the CMRR project scope.

**Weapons Engineering Tritium Facility (WETF):** NNSA's intent is to deinventory and downgrade WETF; deinventory without updating the safety basis had been suggested. LANL observed this week that it will take several years to deinventory. Assuming NNSA approval of the proposed safety basis this month, LANL intends to implement the new safety basis by September, thereby ensuring that on-going operations, including deinventory, occur under an up-to-date, compliant, safety basis.