

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 10, 2008

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending October 10, 2008

Transuranic Waste Operations: The RANT shipping facility credits several 1-hour rated fire walls with preventing the propagation of fires that could impact transuranic waste. A sealant material with an unknown fire rating was used to treat two credited fire walls. With this sealant present, the fire rating of the walls is indeterminate and may not provide the required 1-hour rating. Facility management declared a potential inadequacy of the safety analysis (PISA) and suspended operations.

The sealant fire rating issue had been previously identified. The Facility Operations Director (FOD) issued a standing order that established additional combustible loading controls as compensatory measures to disposition the concern. However, this standing order did not adequately address all relevant fire propagation scenarios and had been allowed to expire. In addition to declaring the PISA, facility management also stated that FOD-issued standing orders were no longer considered an appropriate way to disposition issues where a TSR-level design feature cannot perform its credited safety function. Like other recent PISAs at transuranic waste facilities, these deficiencies were identified as a result of a vital safety system assessment (site rep weekly 9/19/08).

Formality of Operations: In August, the NNSA site office directed LANL to provide additional detail and justification for any required elements of Formality of Operations that wouldn't be implemented by the end of FY09. Last week, the site office acted on LANL's response, approving post-FY09 implementation for specific conduct of engineering deliverables at the Plutonium Facility including completion of priority drawings for vital safety systems. The site office disapproved proposed post-FY09 implementation dates for conduct of maintenance and conduct of engineering at the Weapons Engineering Tritium Facility (WETF) and directed LANL to either resubmit acceptable implementation milestones or provide justification for why FY09 implementation is not feasible along with compensatory measures that can be instituted in the interim (site rep weekly 8/22/08).

With the exceptions noted above for the Plutonium Facility and WETF, all approved milestones for Formality of Operations implementation at LANL nuclear facilities are in FY09. The site office has heavily incentivized meeting these aggressive implementation milestones with an award term performance-based incentive (PBI). The award term PBI appears to have helped garner senior management support for adding substantial resources to accelerate implementation efforts.

Chemistry and Metallurgy Research (CMR) Building: LANL is in the process of developing a 10 CFR 830 compliant Documented Safety Analysis (DSA) that supports operation of CMR beyond 2010. As a part of the safety basis development strategy, LANL committed to submitting portions of the analysis to the site office at key points (phase gates). Last week, LANL submitted draft portions of the DSA to the site office for comment including the hazard and accident analysis. Notably, the unmitigated off-site consequences for a seismically induced facility fire scenario were estimated to be approximately 43 rem. Engineered safety controls identified to mitigate or prevent accident scenarios include the fire suppression system, ventilation system and material containerization (floor wells, safes). Administrative controls include facility material inventory (i.e., material-at-risk) and transient combustible controls. Following site office review of the submittal, LANL will schedule a phase gate review session to resolve issues and obtain site office concurrence.