

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 11, 2011

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B.P. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending March 11, 2011

**WCRR Repackaging Facility – Safety Basis:** Last week, facility management declared a Potential Inadequacy of the Safety Analysis (PISA) and subsequent positive Unreviewed Safety Question at the WCRR repackaging facility based on inconsistencies between the actual glovebox exhaust ducting configuration and assumptions made in the safety basis. The WCRR safety basis analysis on glovebox fire challenges to HEPA filter performance is based on a Plutonium Facility glovebox fire analysis and includes an assumption that the WCRR exhaust ventilation configuration is consistent with the Plutonium Facility glovebox ventilation configuration. Field observations identified that the WCRR glovebox exhaust consists of dual 2.25” exhaust pipes rather than a single 2” exhaust pipe assumed in the safety basis. The WCRR repackaging facility was placed in cold standby when the inconsistency was identified. LANL has completed an evaluation of the safety of the situation that includes new fire analysis with the correct exhaust configuration and concluded that the maximum temperature at the HEPA filters during a glovebox fire would be acceptable. LANL has requested site office approval to resume normal operations and plans to prepare safety basis changes to address this issue.

This week, WCRR facility management declared a TSR violation related to the uninterruptible power supply (UPS) system that is credited to ensure continued operation of the ventilation system in the event of loss of offsite power. The WCRR TSRs specify an annual surveillance requirement to test the ability of the UPS system to supply one hour of power to all required loads. The TSR violation resulted from the discovery that the UPS load test procedure did not call for the system to be tested in alarm mode. Since the alarm is a required load, the test did not comply with the TSR surveillance requirement.

**Federal Oversight:** Both the PISA and TSR violation discussed above were discovered by an NNSA site office safety system oversight (SSO) engineer. The site office engineer was shadowing a contractor team that was performing a vital safety system assessment of the WCRR ventilation system. The NNSA engineer brought the issues to the attention of facility management after the contractor VSSA ended with facility engineers failing to identify these problems. Site office personnel in general and this NNSA SSO engineer in particular have identified a significant number of recent PISAs and TSR violations at LANL nuclear facilities.

**Electrical Safety:** This week, LANL personnel provided an outbrief on the results of their investigation of a utility vault core drilling activity that occurred in December 2010. The core drilling activity was performed within inches of energized 13.2 kV electrical lines and this hazard was not identified and addressed in the Integrated Work Document (IWD). The team concluded that the event represented a significant safety concern with opportunities for work control improvements and lessons learned. Notably, and consistent with previous work control reviews at LANL, the team concluded that the implementation of Integrated Work Management needs improvement including use of IWDs during pre-job briefs and work execution, better scope definition in IWDs and enhanced assurance that only appropriately trained and qualified personnel are used for work execution. The results of this investigation have been provided as input to a broader review chartered by the LANL Deputy Director to develop a comprehensive understanding of obstacles and issues negatively impacting LANL’s Integrated Work Management implementation.