

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 20, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending February 20, 2009

Plaue was onsite this week to discuss the Chemistry and Metallurgy Research Building and the Chemistry and Metallurgy Research Building Replacement Project.

Fire Protection: This week, laboratory management announced an organizational change that would consolidate all personnel with fire protection-related roles and responsibilities into a single division that would report to the Associate Director for Nuclear and High Hazard Operations. The individual who had been serving as LANL's Fire Marshal has been selected to head this new division. The independent Fire Marshall function will be eliminated and the division leader will be responsible for ensuring the robustness and effectiveness of the program and the quality of program-related deliverables. This new approach and management structure for fire protection is consistent with the way other institutional safety management programs (e.g. safety basis) are implemented at LANL.

Also, lab personnel are designing and will soon begin providing training courses to Los Alamos County (LAC) fire fighters on radiological hazards and fire fighting techniques in radiological environments to improve the preparedness of the LAC Fire Department to effectively respond to a fire in a LANL nuclear facility. Eventually, qualification cards for fire fighters will also be developed.

Plutonium Facility: LANL recently completed a backfit analysis on the Plutonium Facility fire suppression system, which was upgraded from safety significant to safety class in the recently approved Documented Safety Analysis. The backfit analysis concluded that the system could meet its safety function for operational fire events (i.e. fires that are not seismically induced) but recommended actions that could significantly improve reliability. The analysis also identified a vulnerability associated with a lack of redundant risers but concluded the system could perform its safety function based on overall system reliability estimates. A project plan to address gaps identified in the backfit analysis and other system evaluations is being developed.

Chemistry and Metallurgy Research Building (CMR): Last week, a contamination event in Wing 3 of CMR resulted in a worker uptake. An operator was moving bags of contaminated equipment that had been removed from a deactivated glovebox. Following a continuous air monitor alarm, radiological control technicians responded and found alpha contamination on the operator's personal protective equipment and personal clothing. Nasal smears were positive, reading approximately 200 dpm per nostril. The affected operator has been put on a bioassay program and is on restricted duty until bioassay results are available. Follow-up actions determined the event was likely caused by the bag of contaminated equipment being dragged across a rough spot on the lab room floor causing abrasions and eventual breaching of the outermost plastic bag used to control contamination.

Transuranic Waste Operations: Prohibited item disposition and repackaging operations are rate limiting steps to prepare transuranic waste to be shipped offsite. To help meet aggressive waste shipment goals for FY09, LANL management has established a second shift for repackaging low-activity (< 0.47 PE-Ci) solidified waste forms in the Dome 231 Permacon and is preparing to begin a second shift for higher-activity operations at the WCRR repackaging facility.