

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 20, 2004

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending February 20, 2004

**Critical Experiments Facility (TA-18):** TA-18 has completed their factual accuracy reviews of the two external assessments of the new temperature scram systems (site rep weekly 1/30/04). The two assessment teams are updating their reports, based on the comments. At this time, the basic conclusion appears unchanged: LANL hasn't addressed all requirements expected for these Safety Class systems.

**Waste Operations:** In November, the NNSA Site Office approved with comment the upgraded safety basis for the TA-54 TRU solid waste operations. Safety analyses of the postulated accident scenarios predict high consequences for several low probability events. LANL has limited available engineered controls; however, NNSA believes that shipping ~2,000 drums with the highest, most dispersible inventory by end of FY 04 would reduce risks by, at least, 70%. This is the Quick-to-WIPP Program.

WIPP shipments have been on hold since October. LANL and the NNSA Site Office have engaged in an extensive effort to address issues and verify readiness. The Site Office recently requested DOE Carlsbad Field Office (CBFO) agreement with a proposed path-forward, including agreement to daily shipments to WIPP for four months, starting in June. The site rep observes that: (1) achieving this risk reduction in TA-54 appears to be essential; therefore, expedited resumption of safe and compliant WIPP shipments needs to be a management priority; (2) once shipments are restarted, operations need to be deliberate, since expedited operations (e.g., daily shipments) could lead to safety or compliance issues. It may be worthwhile for DOE to reevaluate the Quick-to-WIPP September 2004 deadline.

**Authorization Basis (AB):** The NNSA facility rep at TA-54 recently determined that the Pu equivalent definition in the TA-54 safety basis is unclear and is based on references to outdated documents. AB verification and implementation require clear definitions. NNSA has requested LANL to correct this.

**Plutonium Facility (TA-55):** Last week, LANL submitted to the NNSA Site Office the corrective action plan in response to the Pu-238 Type B investigation report (site rep weekly 12/19/03). The plan covers actions to minimize residues; conduct hazard analyses for packaging and storage; develop and implement improved work controls; verify those controls are in place; evaluate AB implications; establish a self-assessment program with specific criteria; establish a process to ensure flow-down of hazards and controls to work documents; and perform a comprehensive inventory assessment. DOE corrective actions in response to the Type B are still to-be-determined and require priority.

Cleanup of the Pu-238 contaminated room is progressing. LANL is preparing to submit an AB process hazard analysis for handling the residue containers and their interim storage in WIPP drums.

**Chemistry and Metallurgical Research Building (CMR):** Last Monday (2/9/04), management found deposits on the outer surface of one of the two Wing 3 exhaust fans. Initial samples indicated these were potentially shock-sensitive perchlorates at about 9 times the action level. CMR isolated the area, shutdown the fan, and prohibited Wing 3 work that could disturb ventilation. An emergency response team responded. Analysis last Tuesday of one sample indicates stable iron perchlorate. CMR is developing a work package to remediate visible perchlorates using appropriate personal protective equipment. CMR has a TSR admin control program focused on minimizing and controlling perchlorates, based on past experience. This event is motivating a review of that program.