

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 23, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending April 23, 2004

Weapons Engineering Tritium Facility (WETF): The NNSA Operational Readiness Review (ORR) started this week and will conclude next week.

Critical Experiments Facility (TA-18): LANL plans to conduct a management self-assessment (MSA) of TA-18 operations in early May in response to questions raised by the NNSA Site Office. Relatedly, NNSA and LANL are currently relying on a set of administrative controls and interim compensatory measures to prevent the most significant postulated accident in TA-18 – an uncontrolled reactivity excursion that causes melting and partial vaporization of a plutonium core or sample. These controls are the primary defense against this accident right now and appear to be equivalent to safety-class administrative controls, in the sense of the Board's Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*. However, most of these controls are missing from the current list of those to be verified in response to the Board's recommendation. The postulated TA-18 accident has the 2nd highest predicted consequence of any postulated accident in LANL nuclear facilities. It appears that these controls ought to be included and have priority for verification (site rep weeklies 4/2/04, 2/13/04, 1/30/04).

Plutonium Facility (TA-55): Higher priority and increased management attention appear warranted on NNSA and LANL reaching agreement on the scope and schedule of the Type B corrective action plan (CAP). Particularly, NNSA needs to take appropriate action on judgements of need under federal responsibility and on the LANL CAP proposed 2 months ago (site rep weeklies 3/26/04, 2/20/04).

Fire Protection: This week, The NNSA Site Office issued an assessment on fire protection system maintenance and requested LANL to provide a corrective action plan within 30 days. Among the institutional improvements needed are adequate funding to promptly restore impaired safety systems to service (based on lessons learned from a LANSCE fire-pump fire); adequate funding to reduce the deferred maintenance backlog; complete and accurate Master Equipment Lists (MELs). LANL is working to update the MELs for nuclear facility vital safety systems by September 2004.

Authorization Basis (AB): Annual updates of nuclear facility ABs have rarely occurred here. Also, neither LANL nor the NNSA Site Office maintains a complete list of AB documents. Some nuclear facilities maintain their own list. For example, it's been 7 years since the last TA-55 update was approved, and the current TA-55 list includes 88 documents (some of these are awaiting NNSA action). The diffusion of the AB over numerous documents for some facilities has been problematic for NNSA and LANL operations personnel who need to clearly understand what constitutes the AB. NNSA relies on LANL maintaining a complete list in the authorization agreements, as required by the applicable LANL Laboratory Implementation Requirement (LIR); however, neither LANL nor NNSA has enforced this requirement, and most authorization agreements are out of date (site rep weeklies 10/24/03, 2/14/03).

Radiography Facility (TA-8-23): LANL has placed TA-8-23 into cold standby due to self-identified non-compliances with the National Fire Alarm Code (NFPA 72), including with testing and inspection requirements. TA-8-23 is a Hazard Category 2 nuclear facility operating under a two-year old Justification for Continued Operation (JCO). Operations were already restricted because of lightning protection deficiencies and confusion on the authorization basis, as reported last week.