

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 15, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending October 15, 2004

Winters was on-site this week augmenting site rep coverage of resumption activities.

Management: LANL is splitting the Operations Associate Directorate into two parts: (1) Technical Services, and (2) Security and Facility Operations. The former will include functions such as performance surety, facility engineering, project management, health and safety, radiation protection, environmental protection, and operational efficiency. The latter will include waste operations, emergency response, security, facility support, and site planning.

Resumption Status: Lab readiness reviews (LRRs) for plutonium operations (TA-55, CMR) continue. The LRRs for Pu-238 operations and TA-18 critical experiments will likely begin next week, followed shortly by the LRR for TA-50/54 higher-risk waste operations. This week, one LRR team for a non-nuclear operation concluded that the prior management self-assessment (MSA) was incomplete, in spite of a well-prepared MSA report. The LRR team terminated their review and started a technical assist. While this is disappointing, it does demonstrate a level of integrity in the review process.

Critical Experiment Facility (TA-18): NNSA is overdue in submitting its report to the Board demonstrating that the safety-class in-core temperature monitoring system (ITMS) will operate reliably and effectively to prevent critical assemblies from overheating (ref: Board letter 7/9/03). NNSA and LANL are not pursuing ITMS because Security Category I/II operations at TA-18 will terminate in less than a year. This affects 4 of the 5 assemblies. The fifth, SHEBA, uses low-enriched uranium solution fuel and may continue to operate. SHEBA will require resolution of the ITMS-related issues, which could be as simple as a well-administered limit on plutonium sample size.

NNSA is delaying its response because of uncertainty in what critical operations are really required during the next year. The recent TA-18 MSA report describes operations management and resource issues. It appears to validate still-open concerns that were raised in a more recent Board letter (5/21/04). Because of these open issues, TA-18 appears to have limited near-term ability to support an expected broad range of complex operations including: early-move of Security Category I/II material, transition to Nevada Test Site, and critical assembly operations for experiments and training.

Radioactive Liquid Waste Treatment Facility (RLWTF): NNSA has approved mission need (i.e., Critical Decision 0) for an approximately \$60M RLWTF upgrade project. Since 1963, the RLWTF has collected, treated, and disposed of LANL radioactive and other liquid wastes. While construction has started on a new pump house and influent storage facility for the low-level streams, the larger upgrade project is key to ensuring continued reliability of the remainder of the facility, including those portions that process the higher-level transuranic waste streams from TA-55.

The upgraded facility is expected to be categorized as Hazard Category 2 (HC-2). The NNSA approval memo specifies that the preliminary functional classification of safety systems, the bounding accident scenarios, and other aspects of the facility safety basis be submitted and accepted by the NNSA Site Office authorization basis team as part of conceptual design and prior to LANL requesting approval of Critical Decision 1.